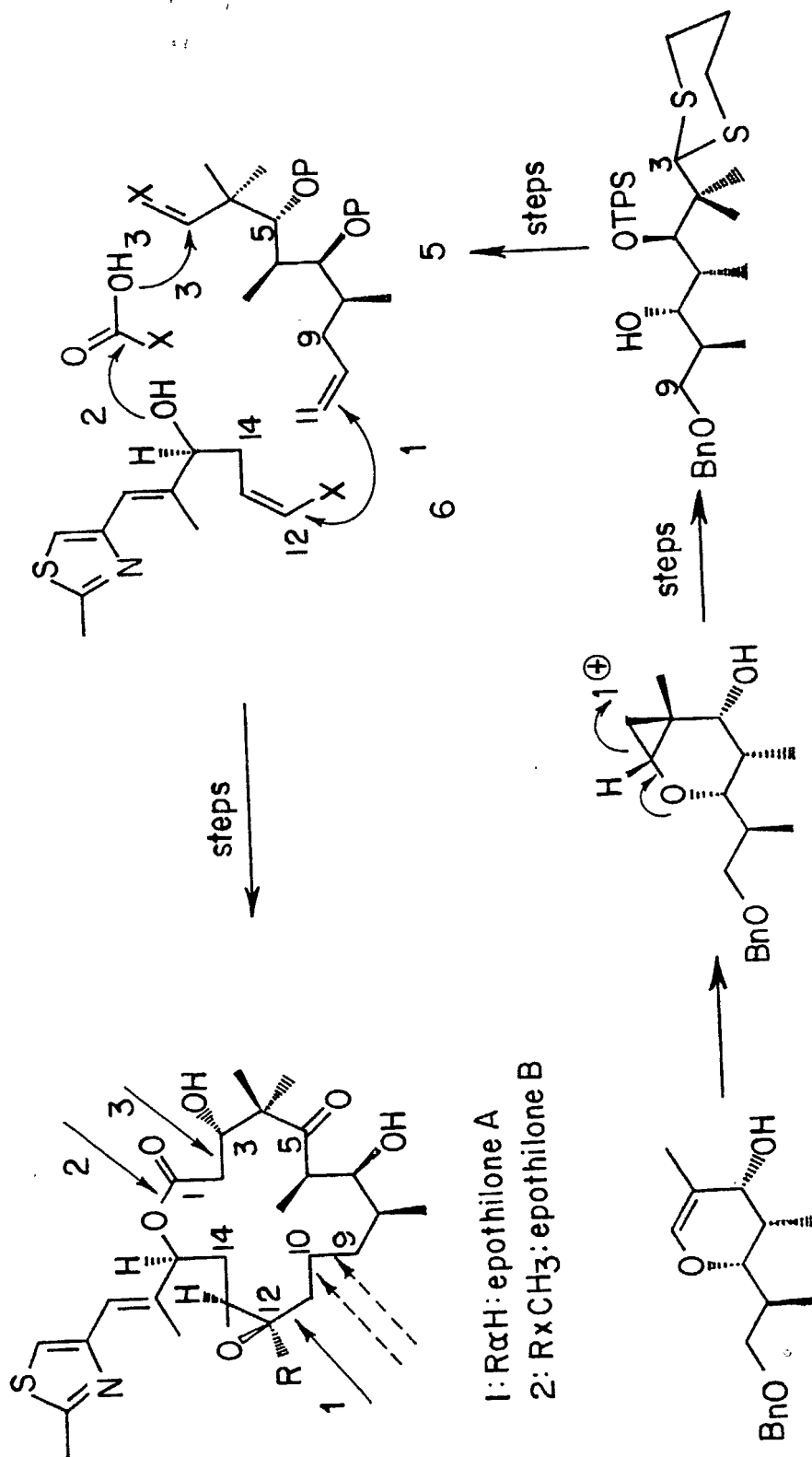


FIG. 1A



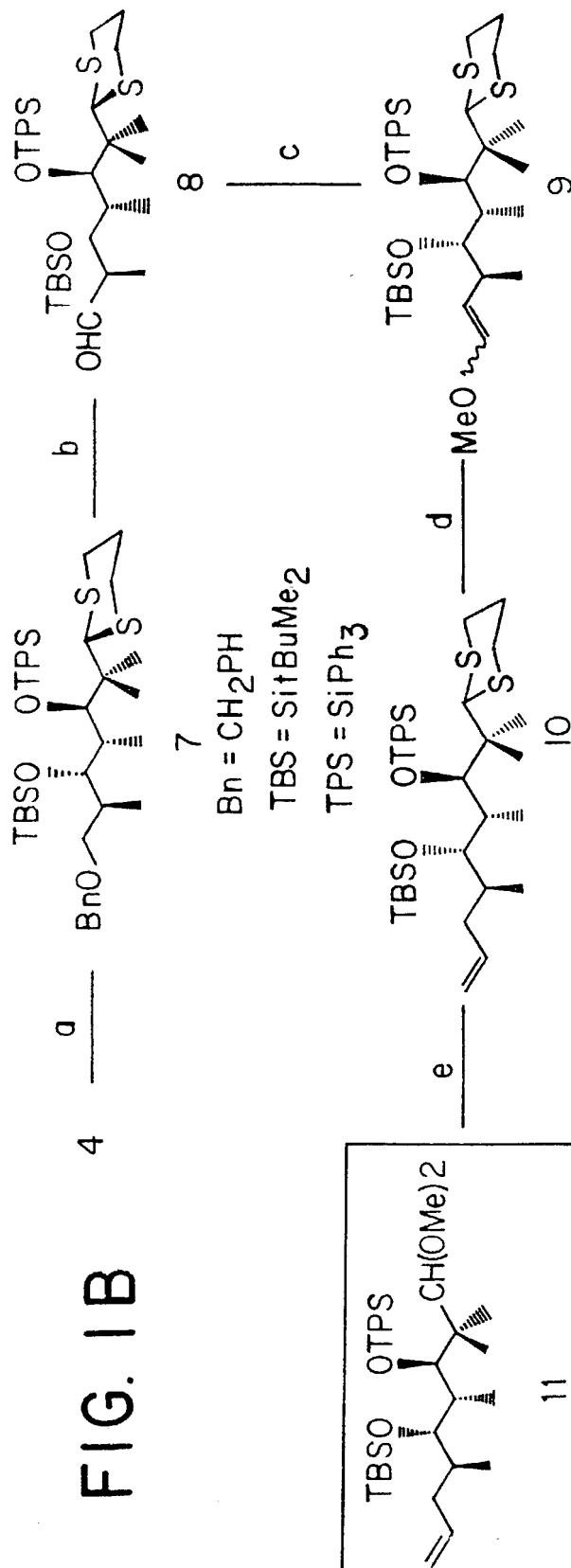
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FIG. 1B



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FIG. 12B

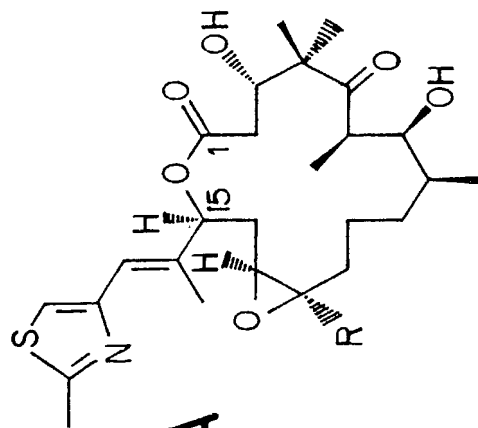
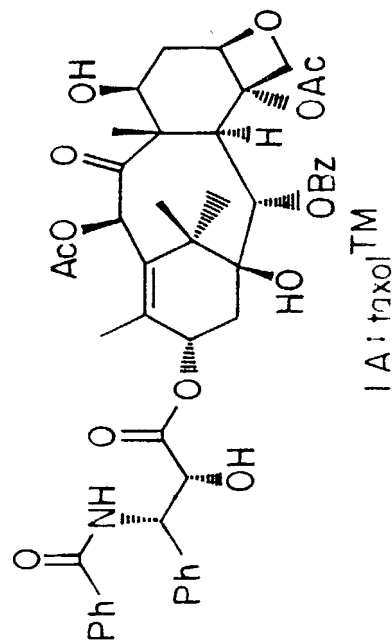
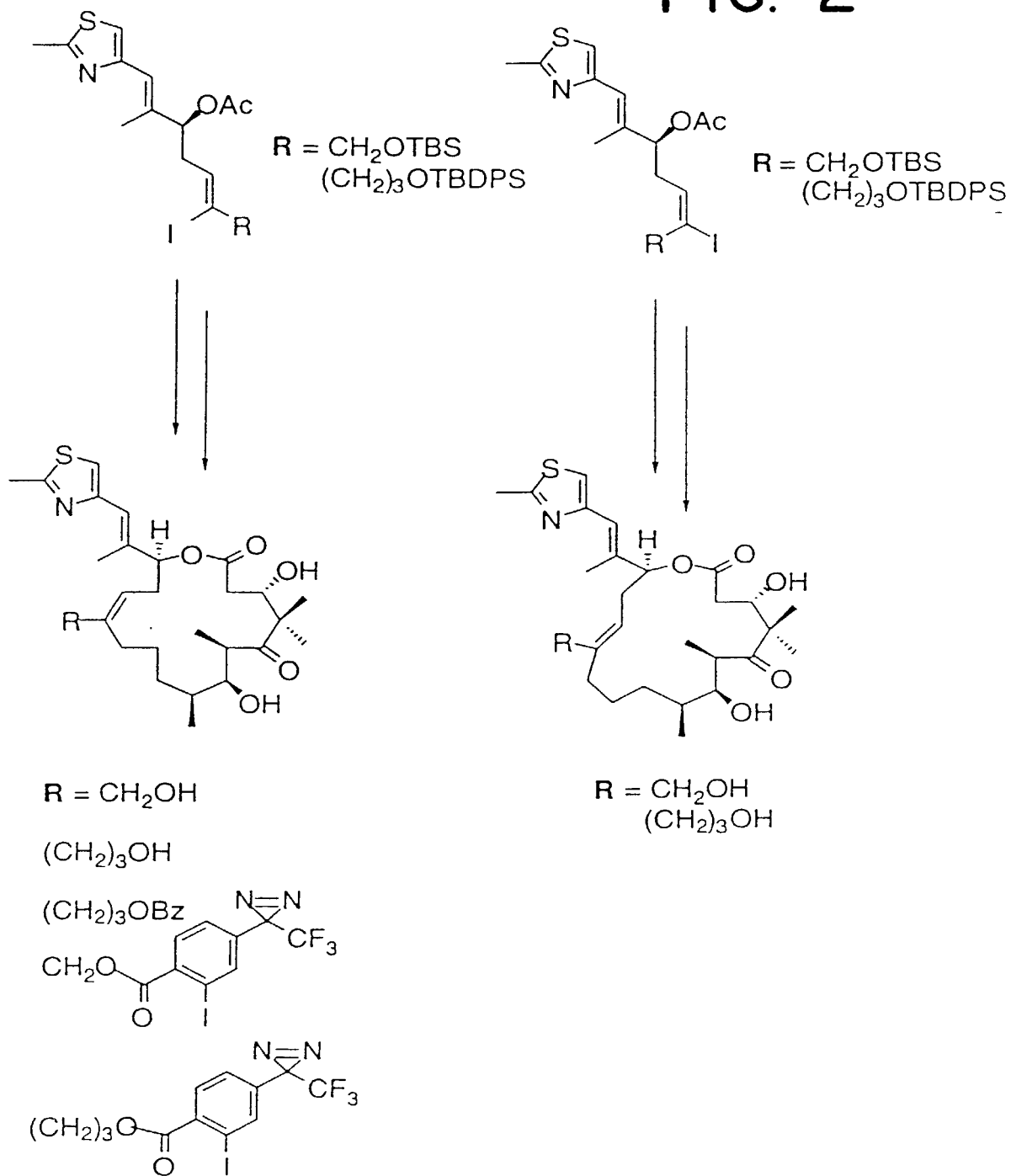


FIG. 12A

R = H: epothilone A
R = CH_3 : epothilone B

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FIG. 2



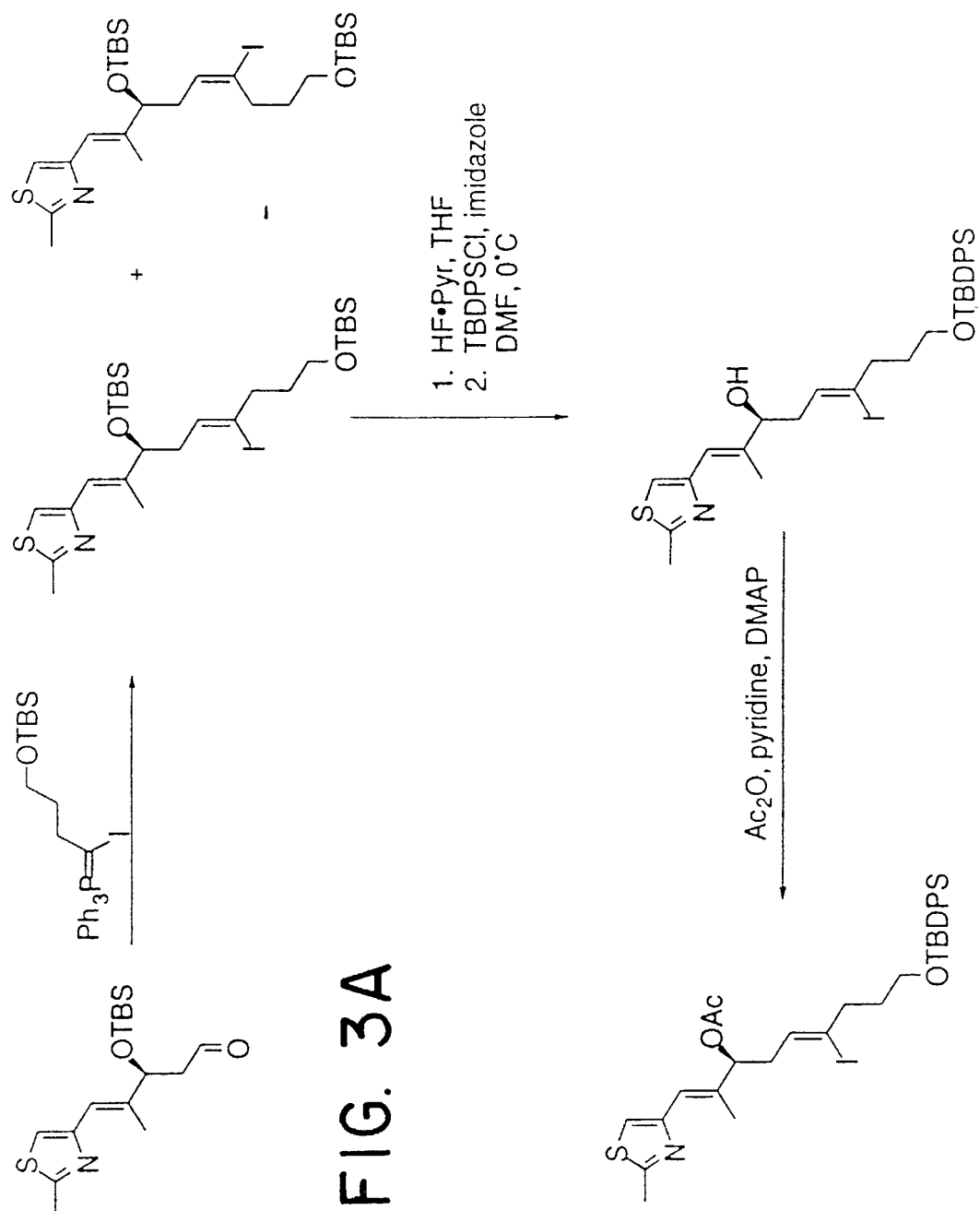


FIG. 3A

FIG. 3B

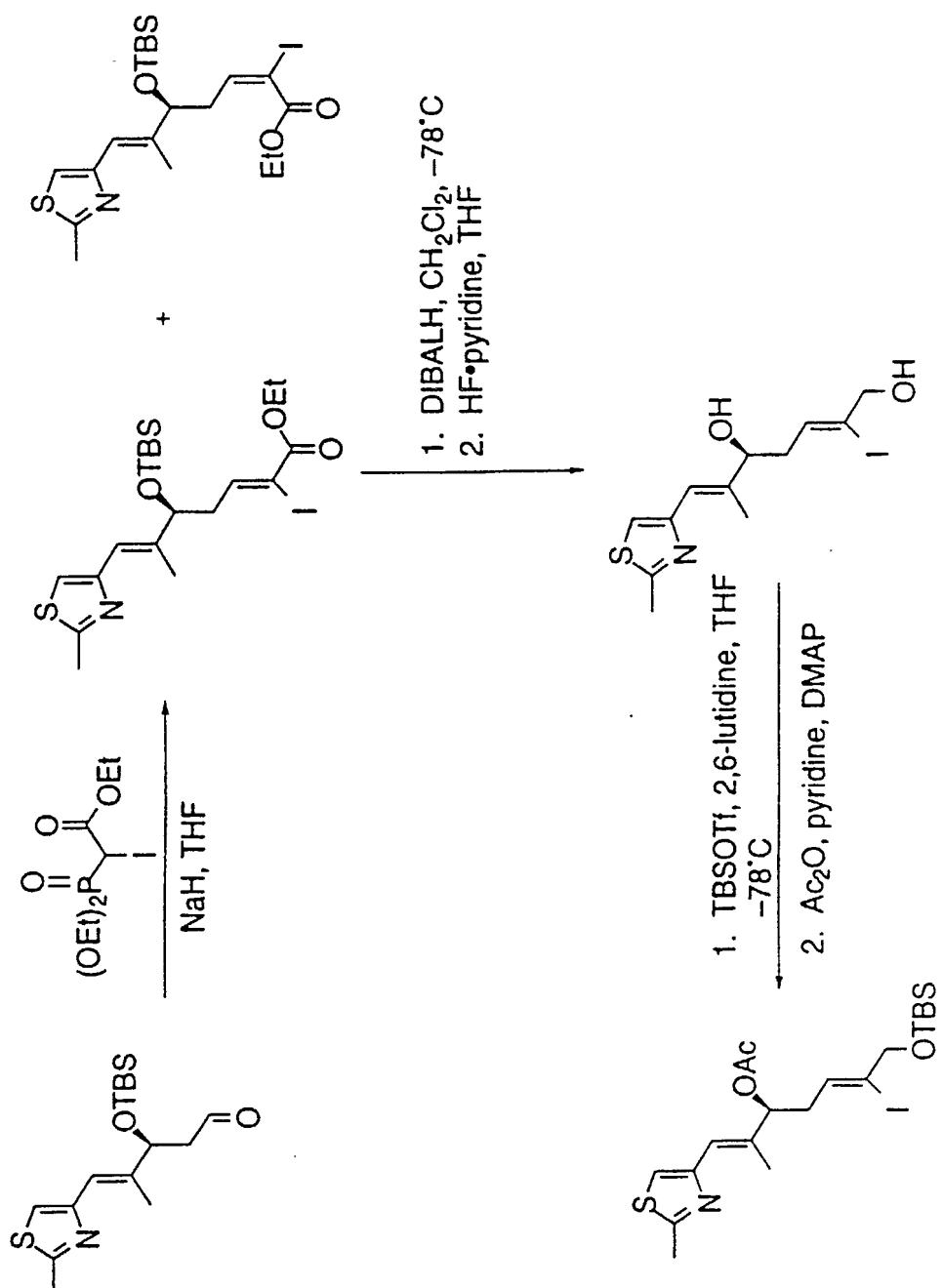
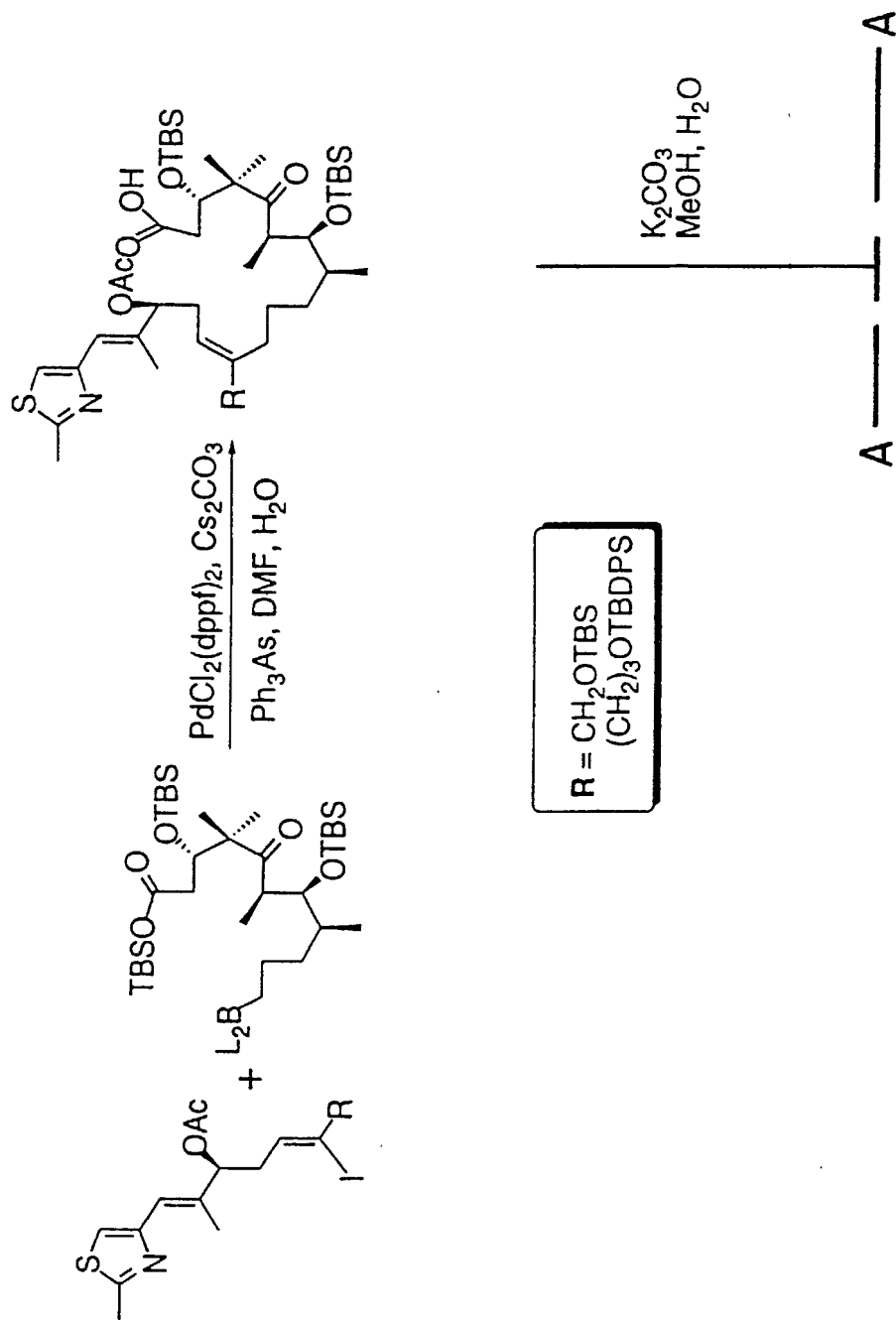


FIG. 3C



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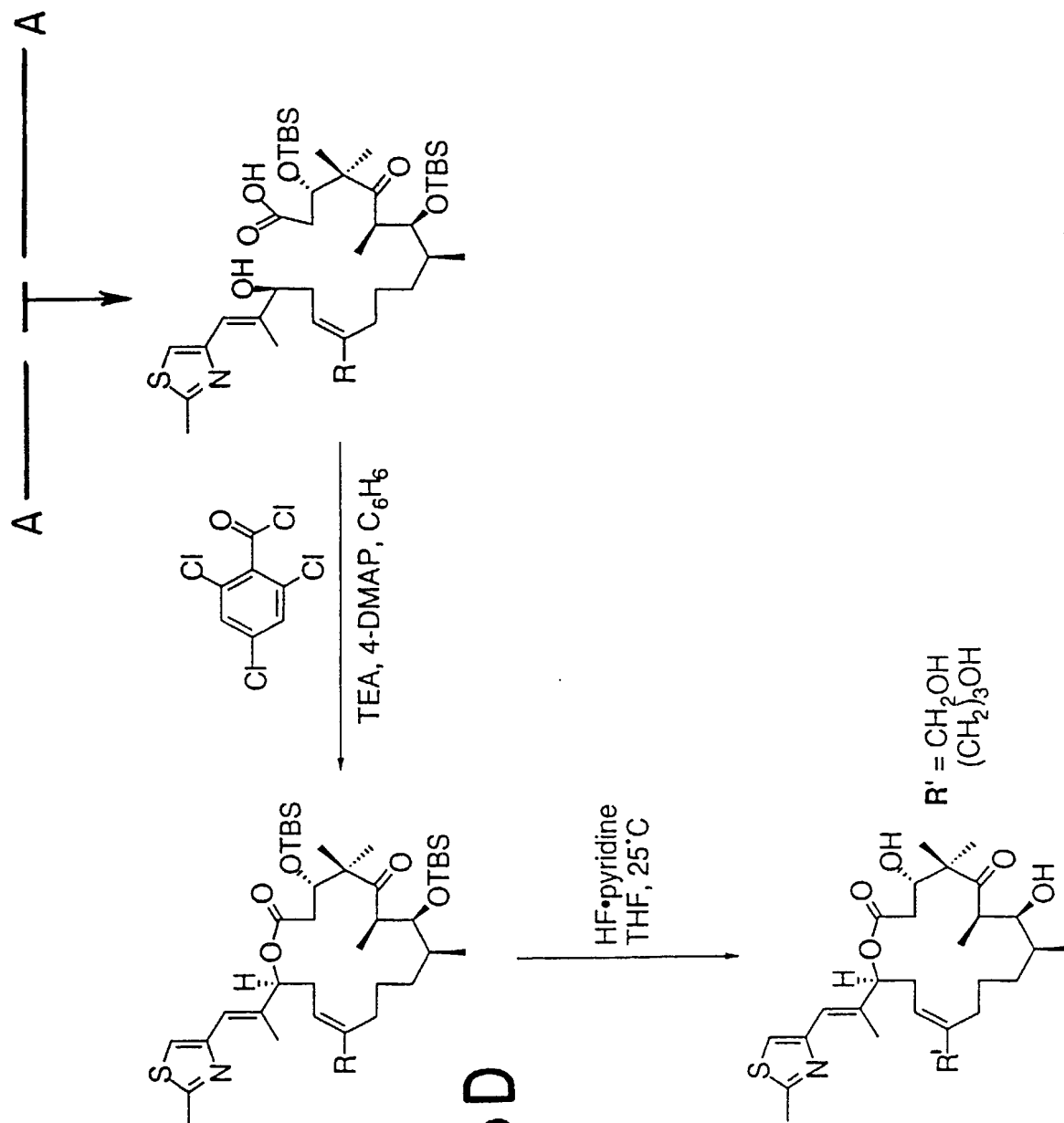


FIG. 3D

FIG. 3E

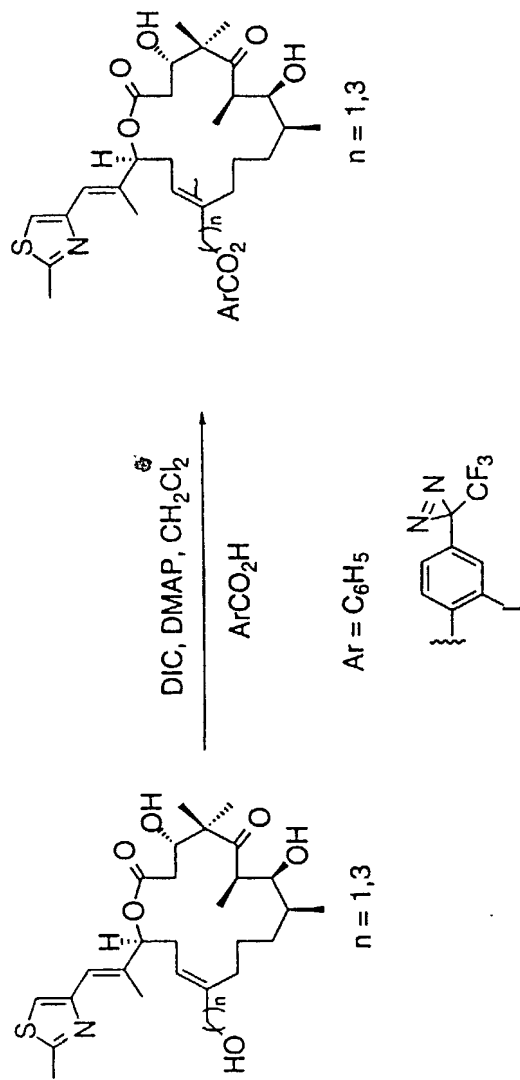


FIG. 3F

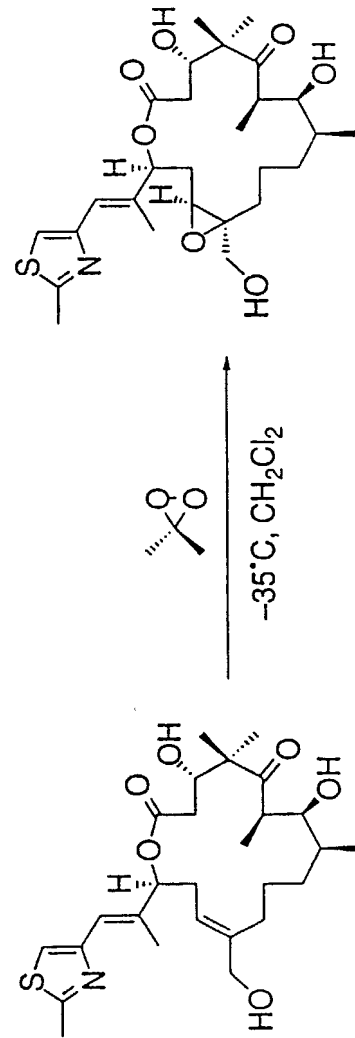


FIG. 4A

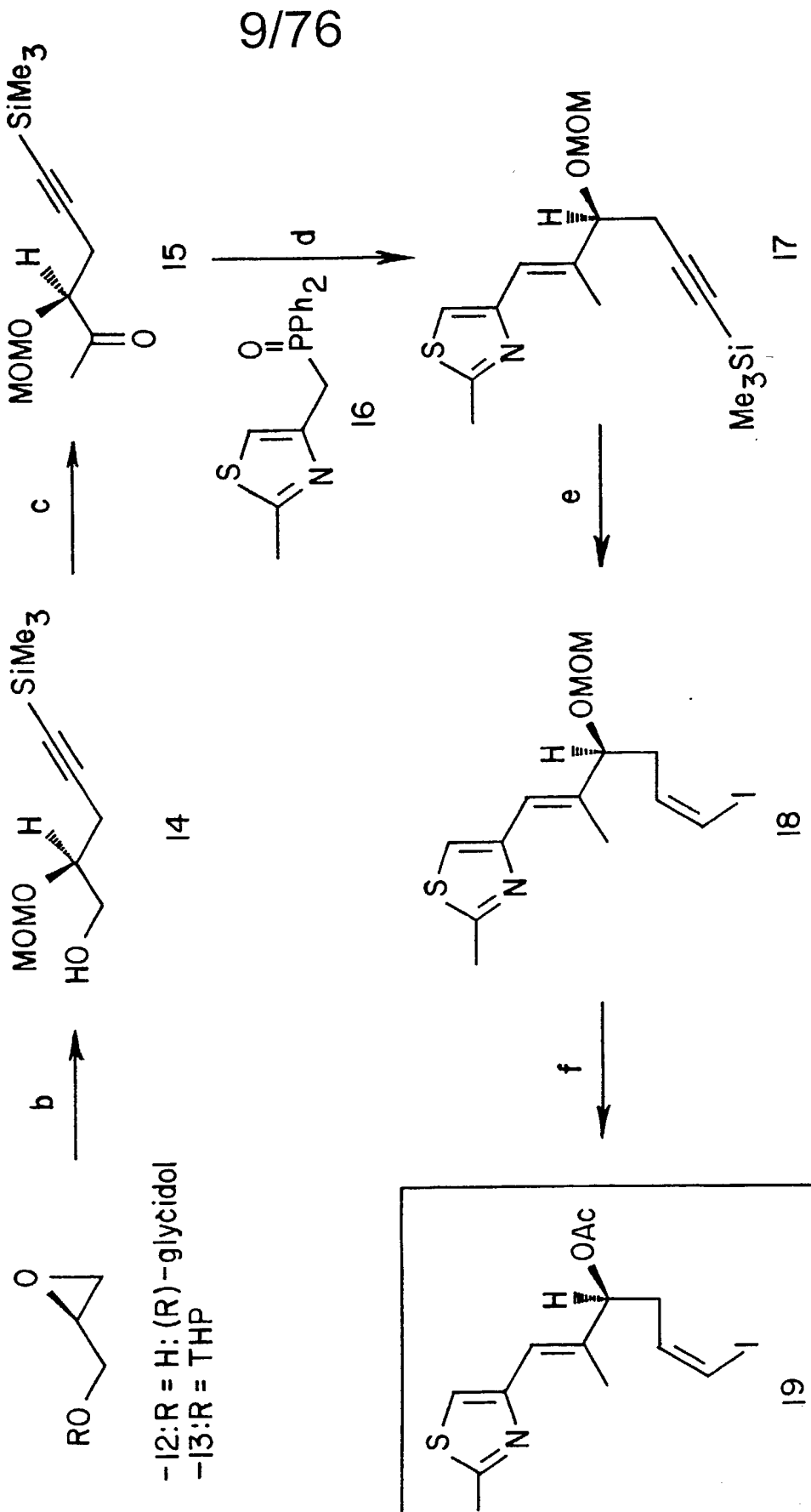
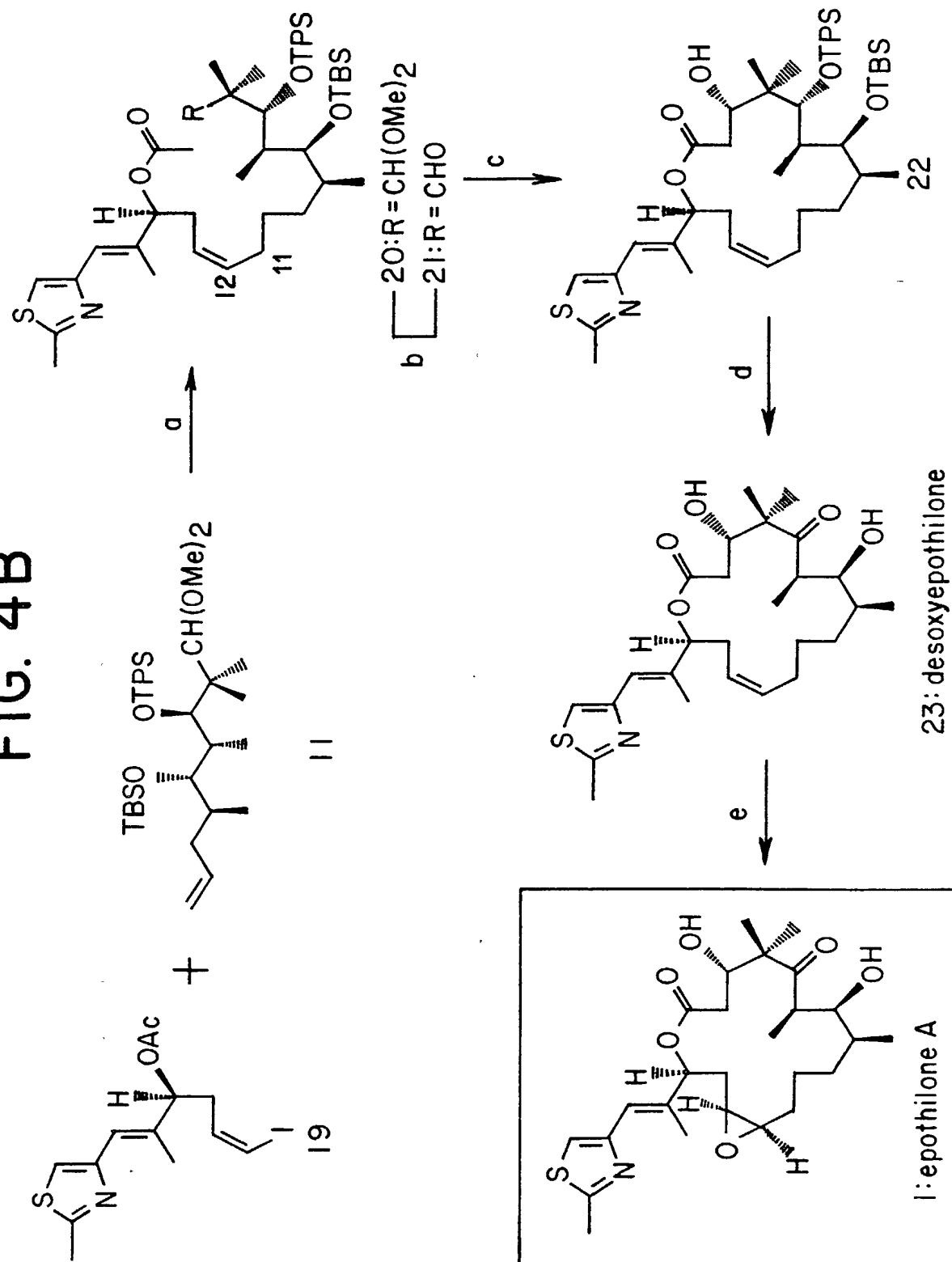


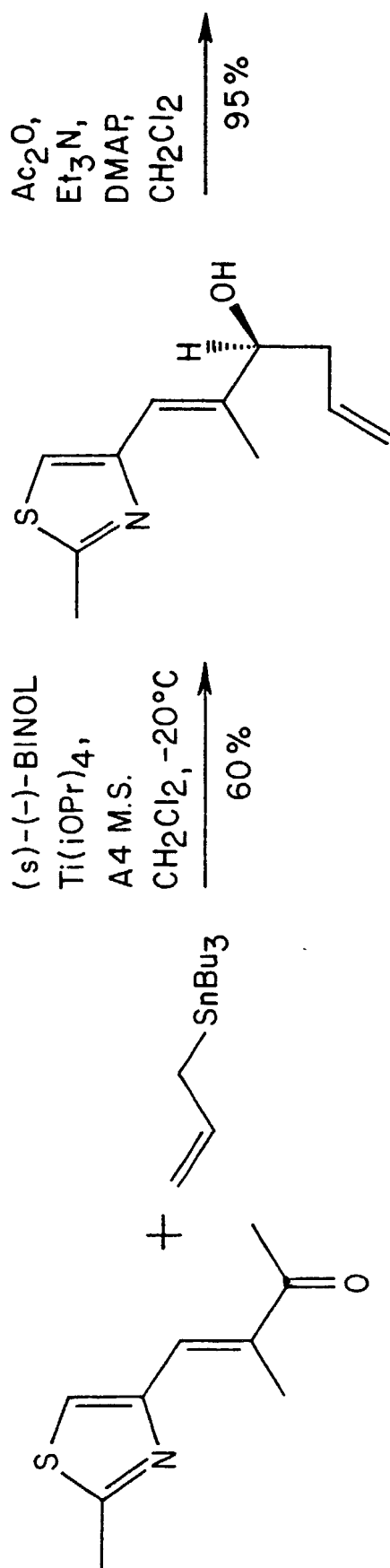
FIG. 4B



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FIG. 5



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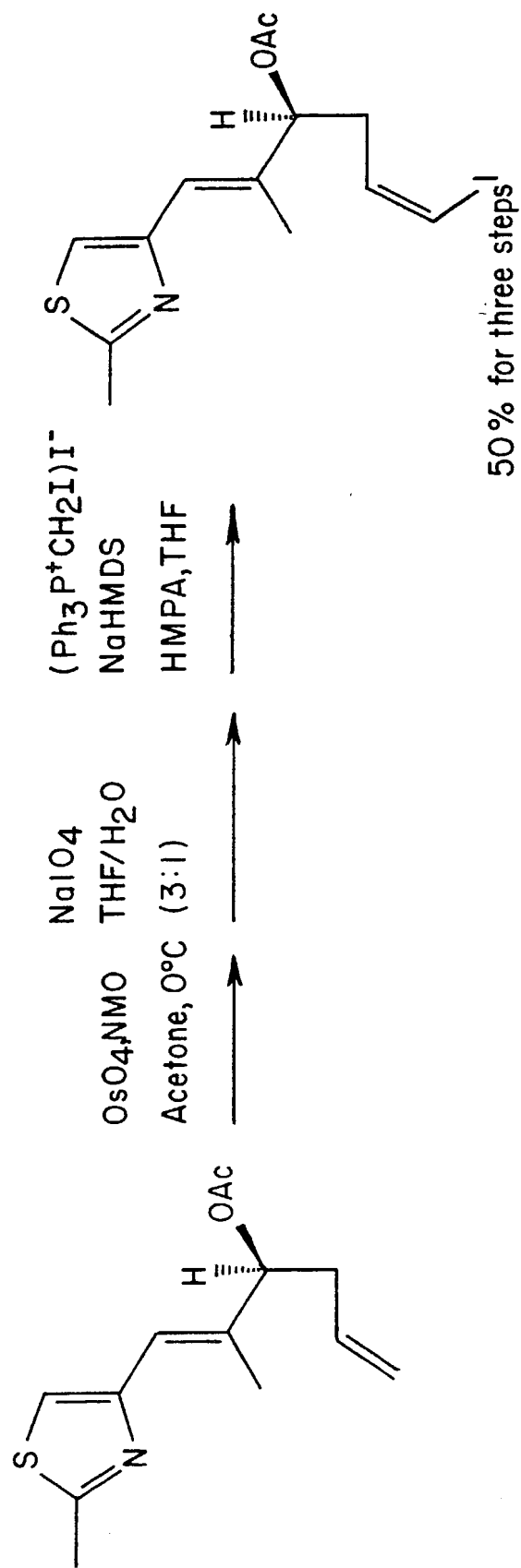


FIG. 6A

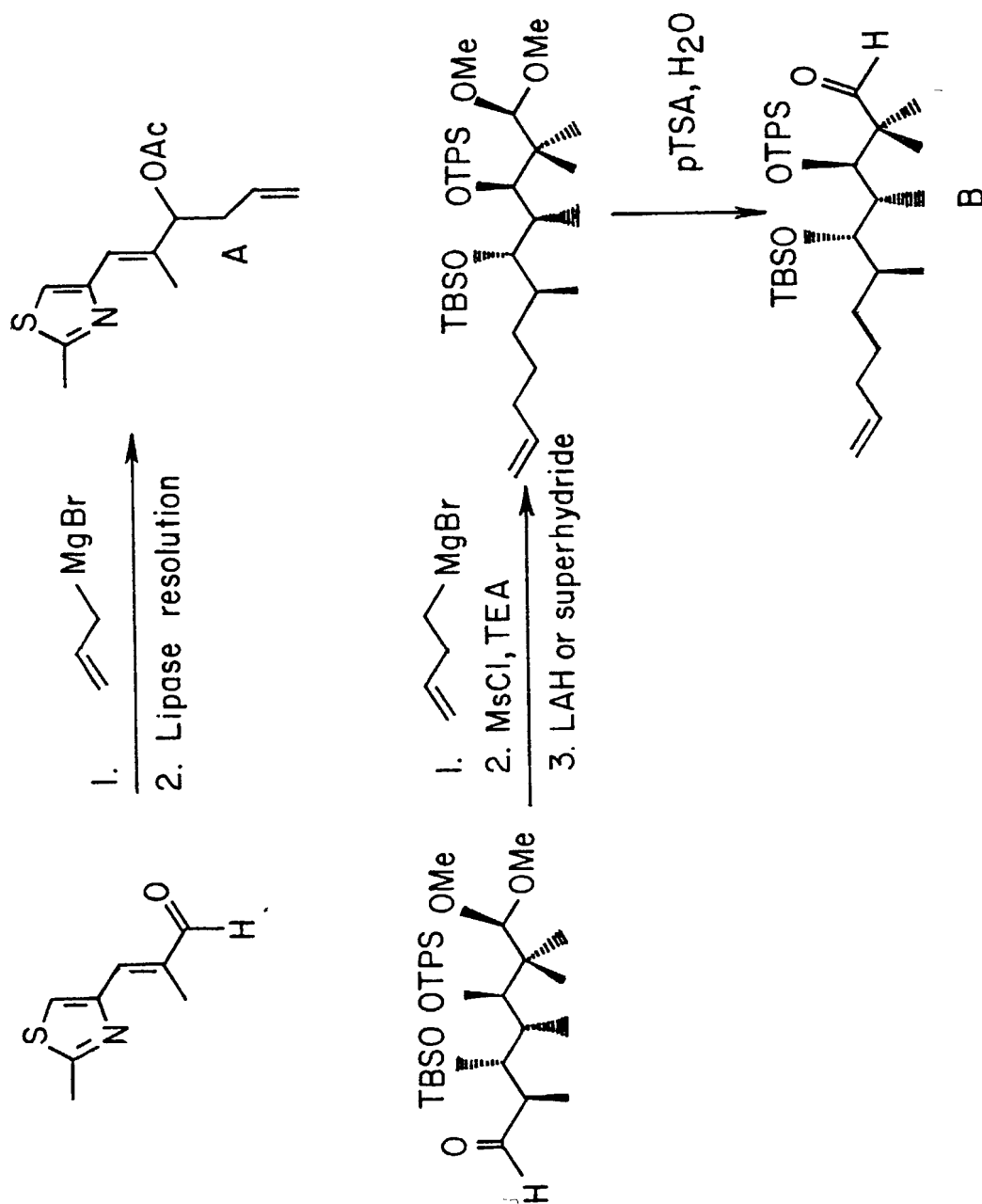
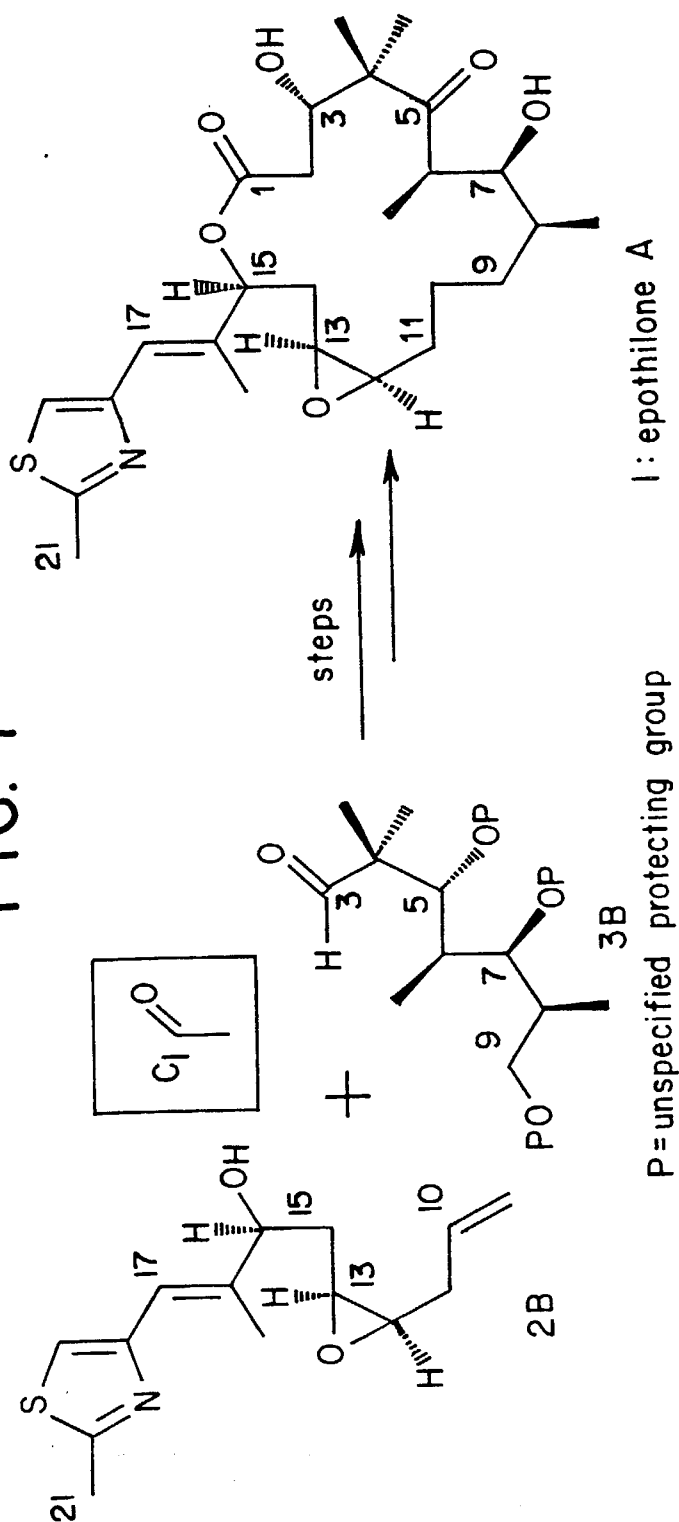
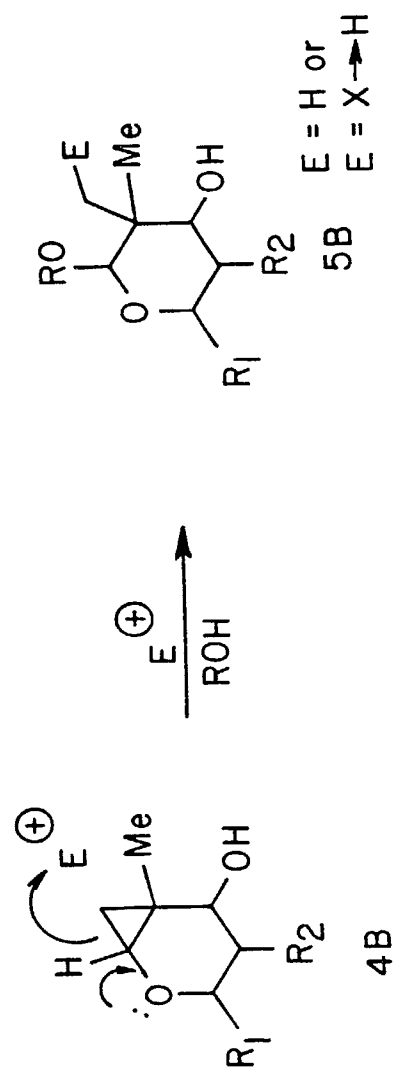


FIG. 7



Convergent strategy for a total synthesis of epothilone A (1).



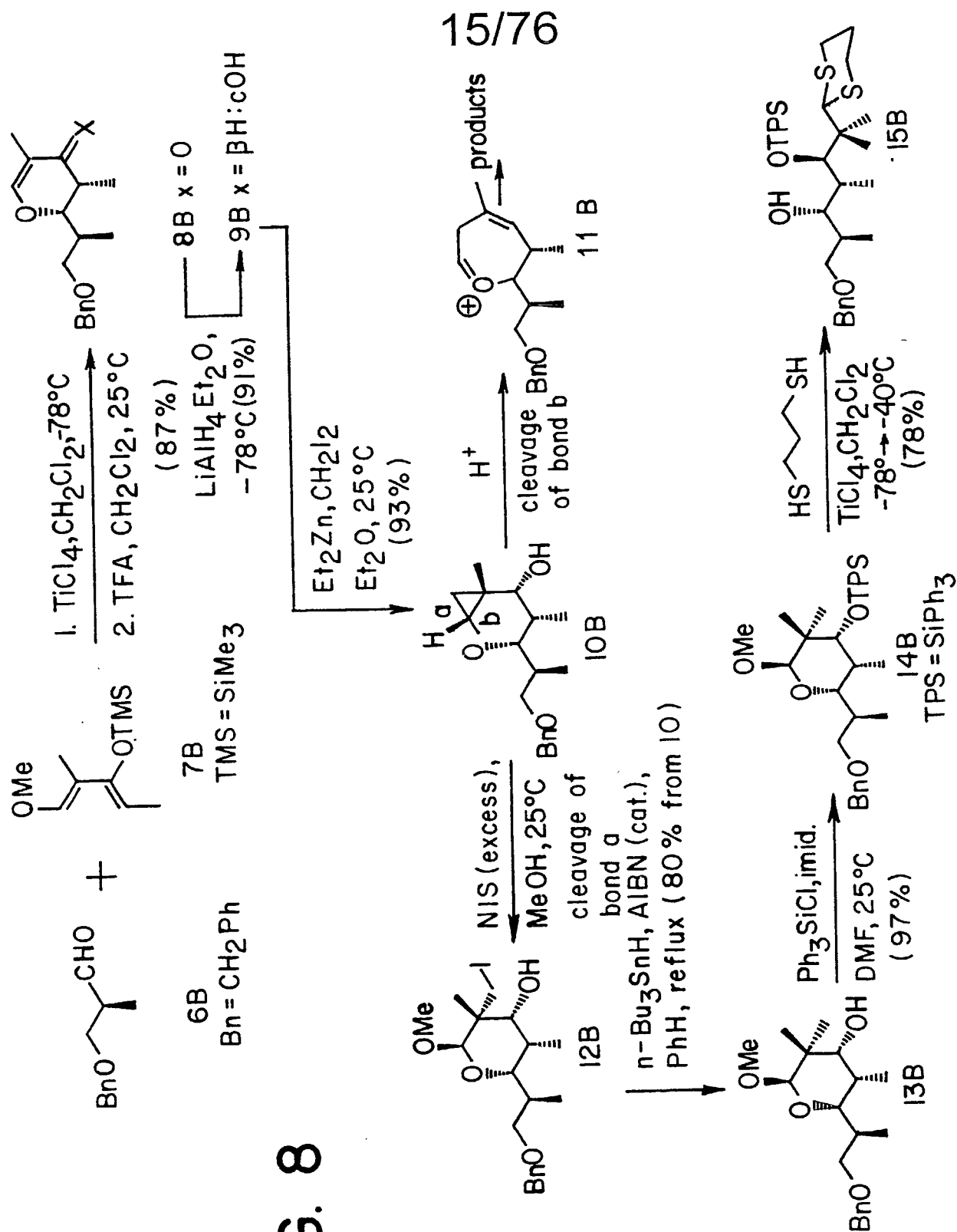
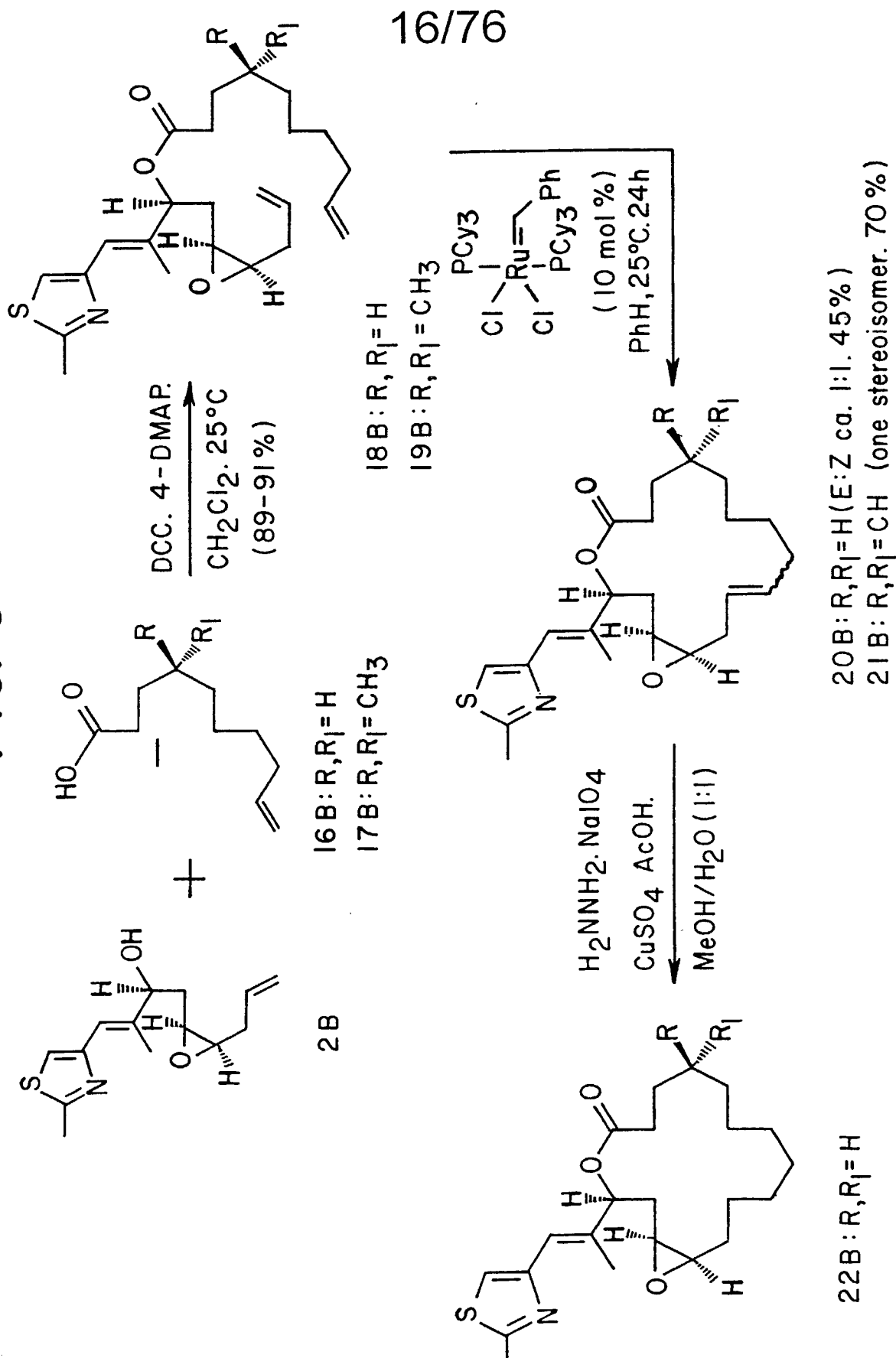


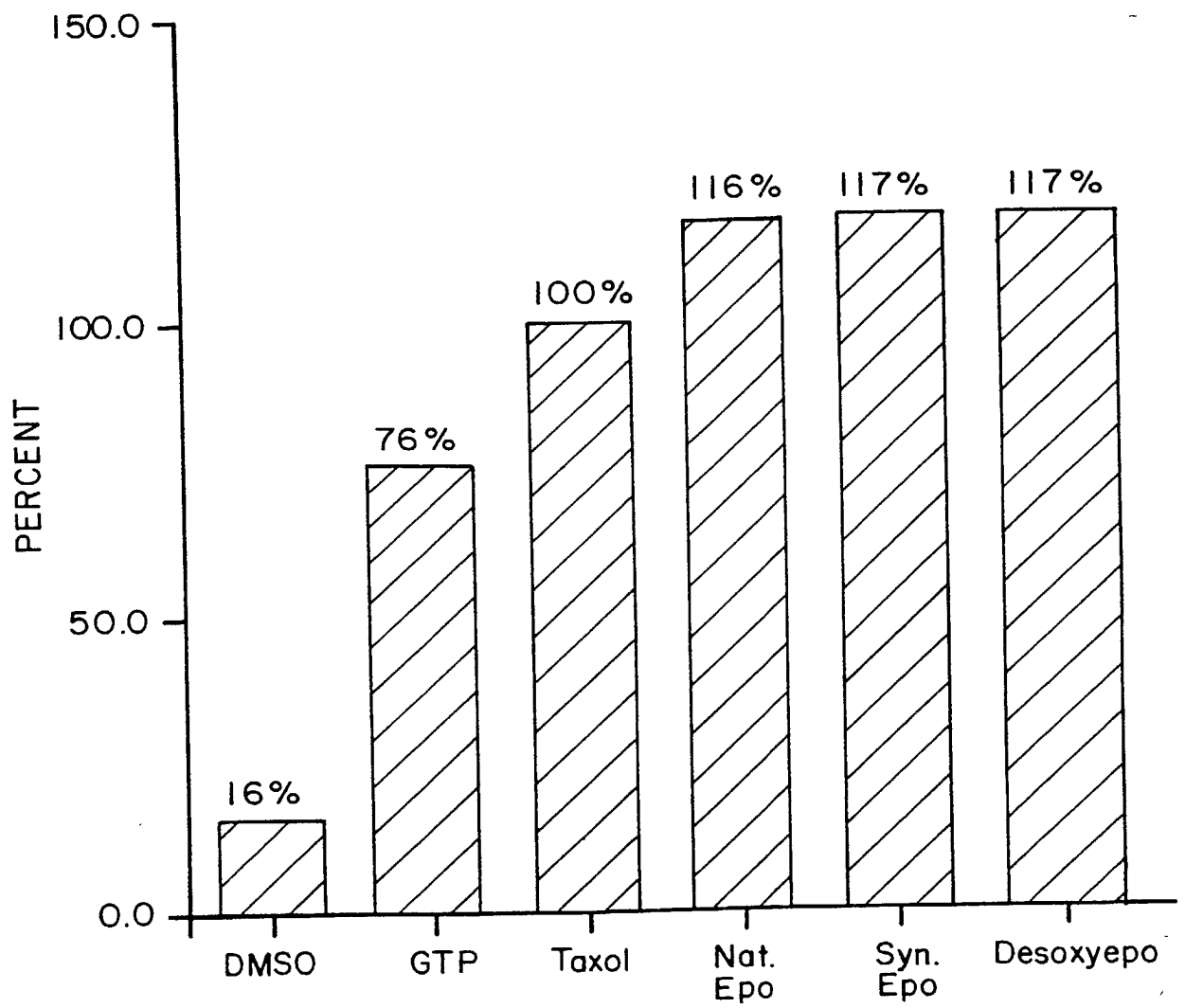
FIG. 8

FIG. 9



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FIG. 10



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FIG. II

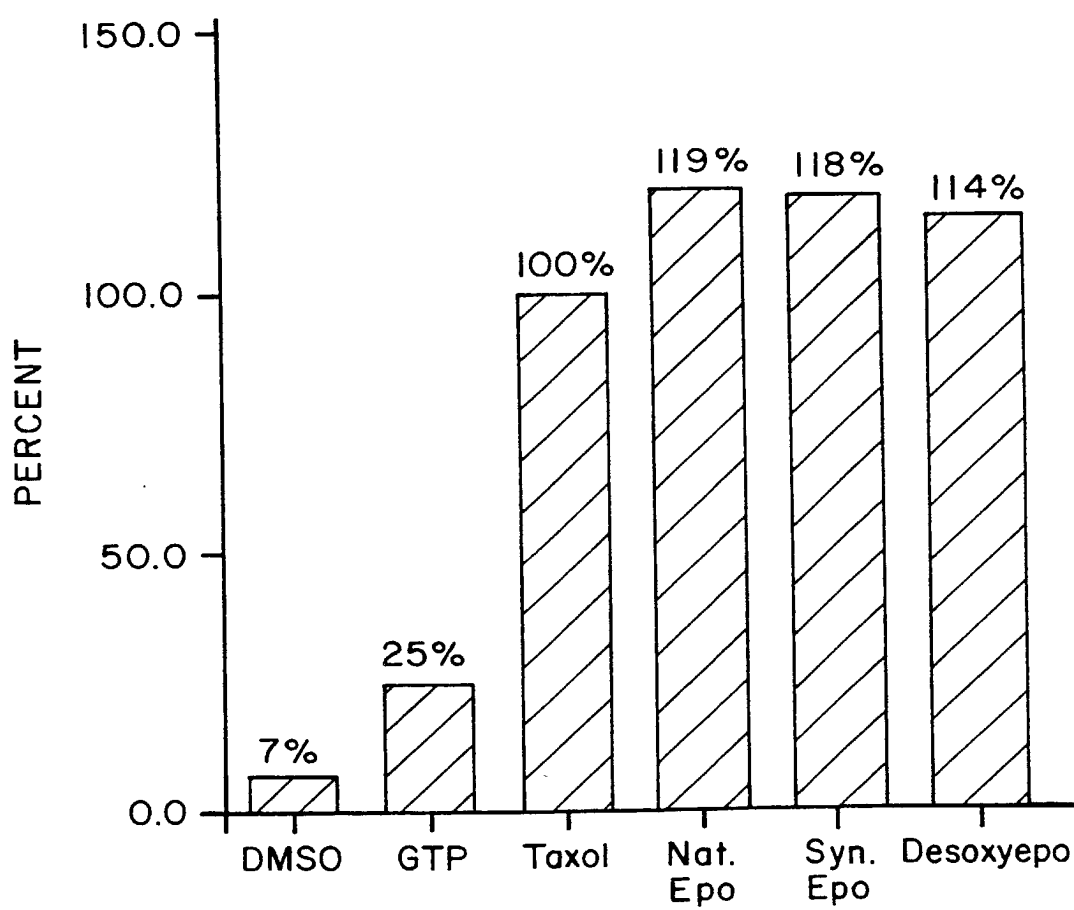


FIG. 13

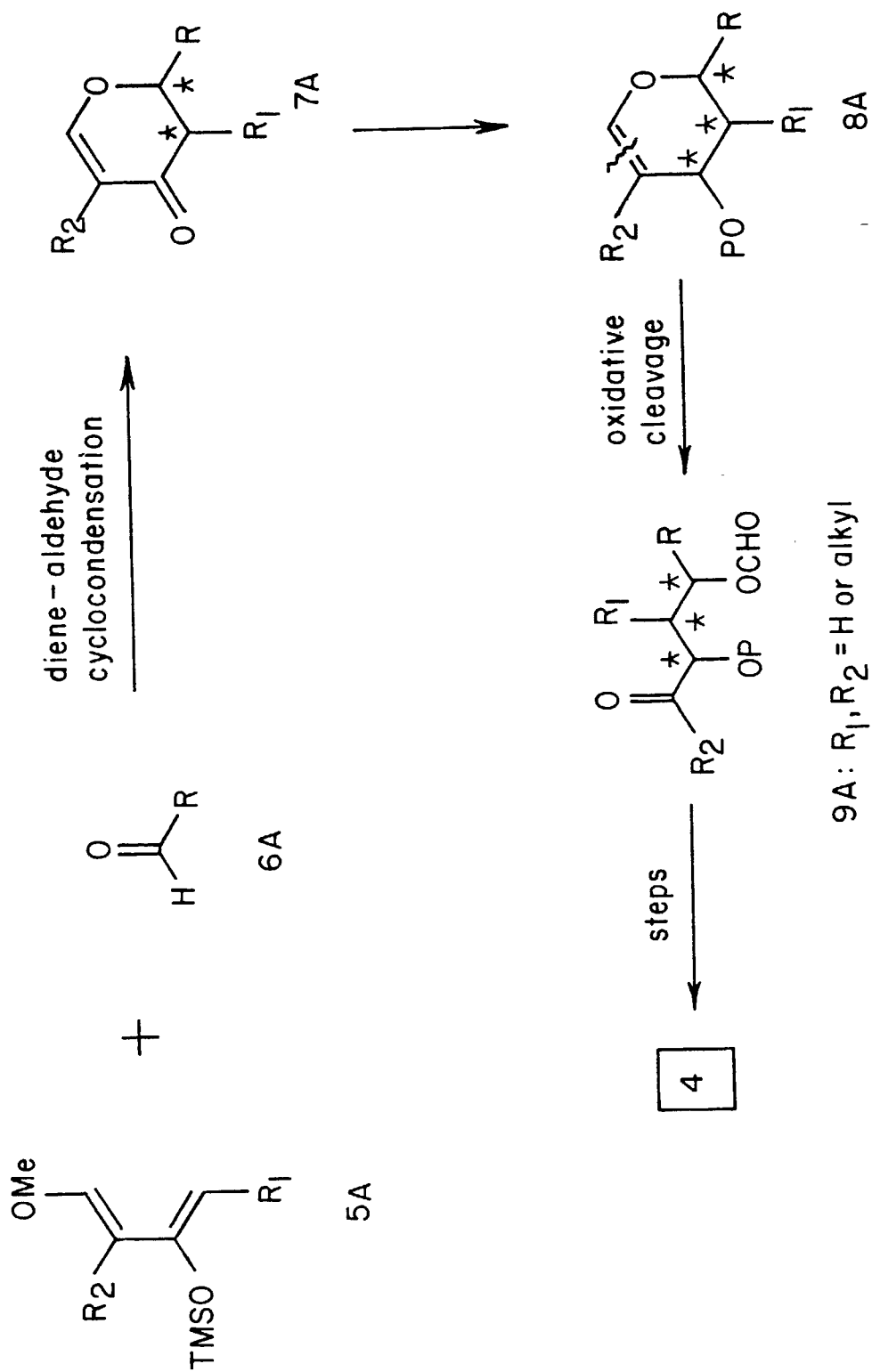


FIG. 14A

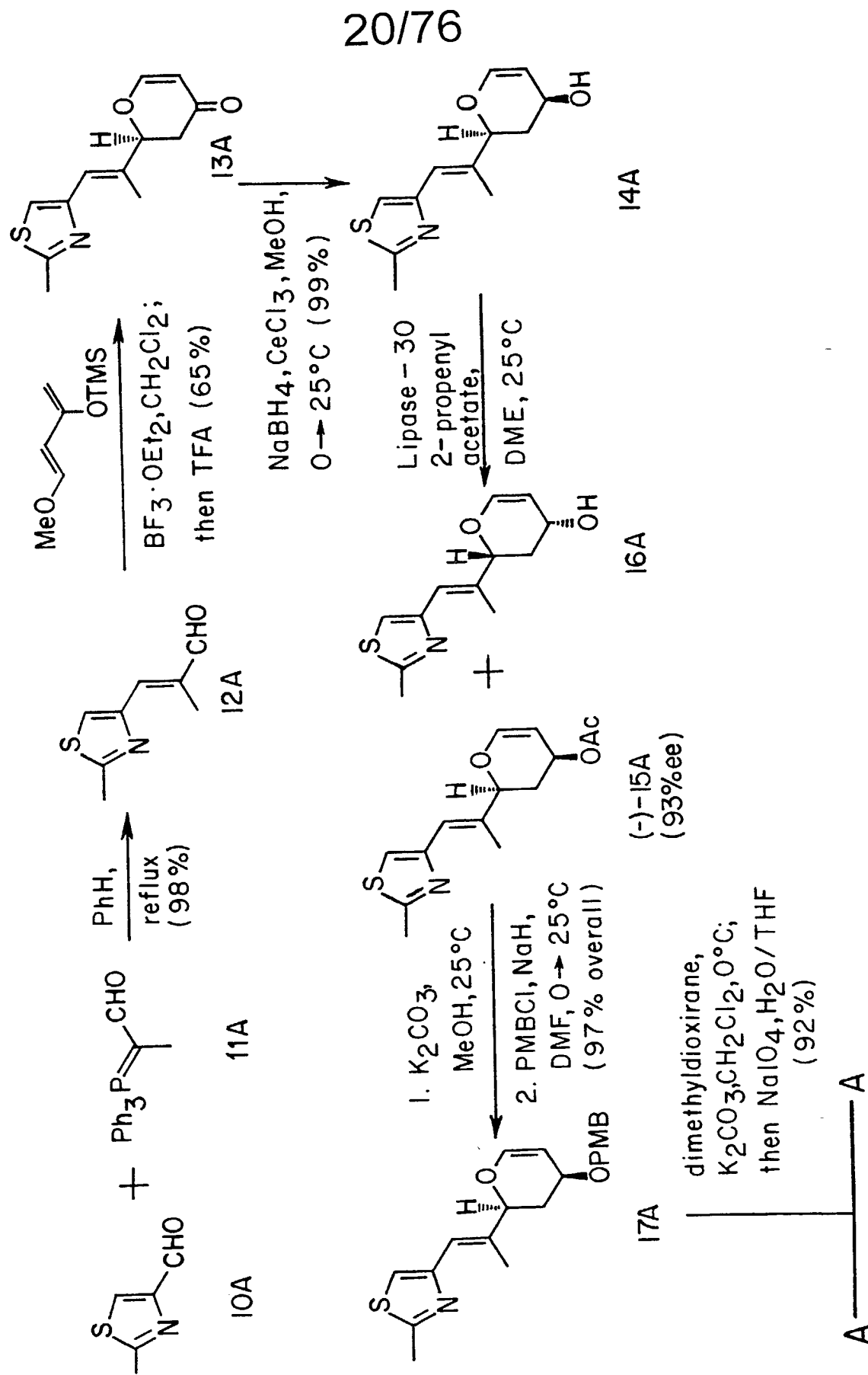


FIG. 14B

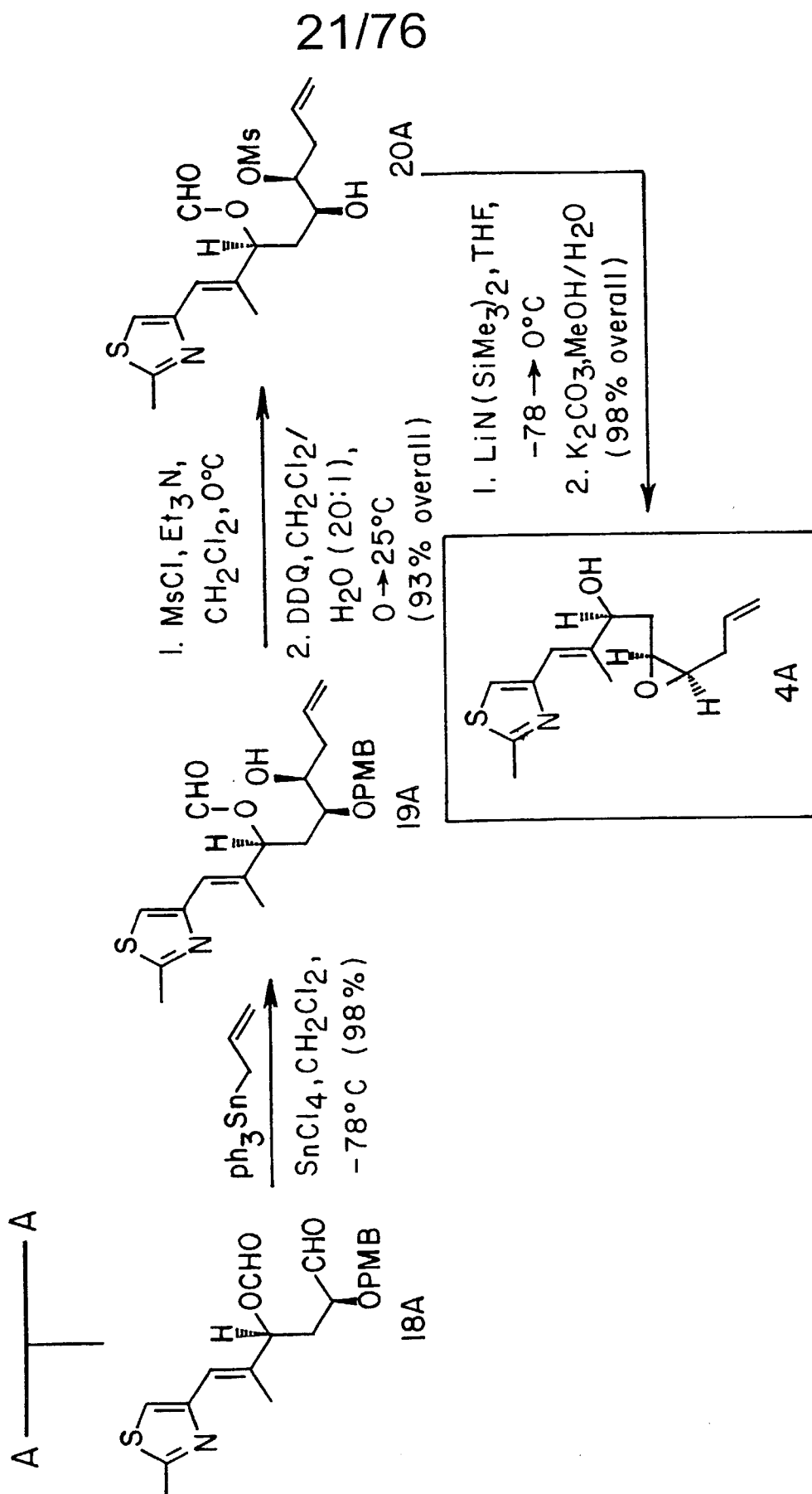
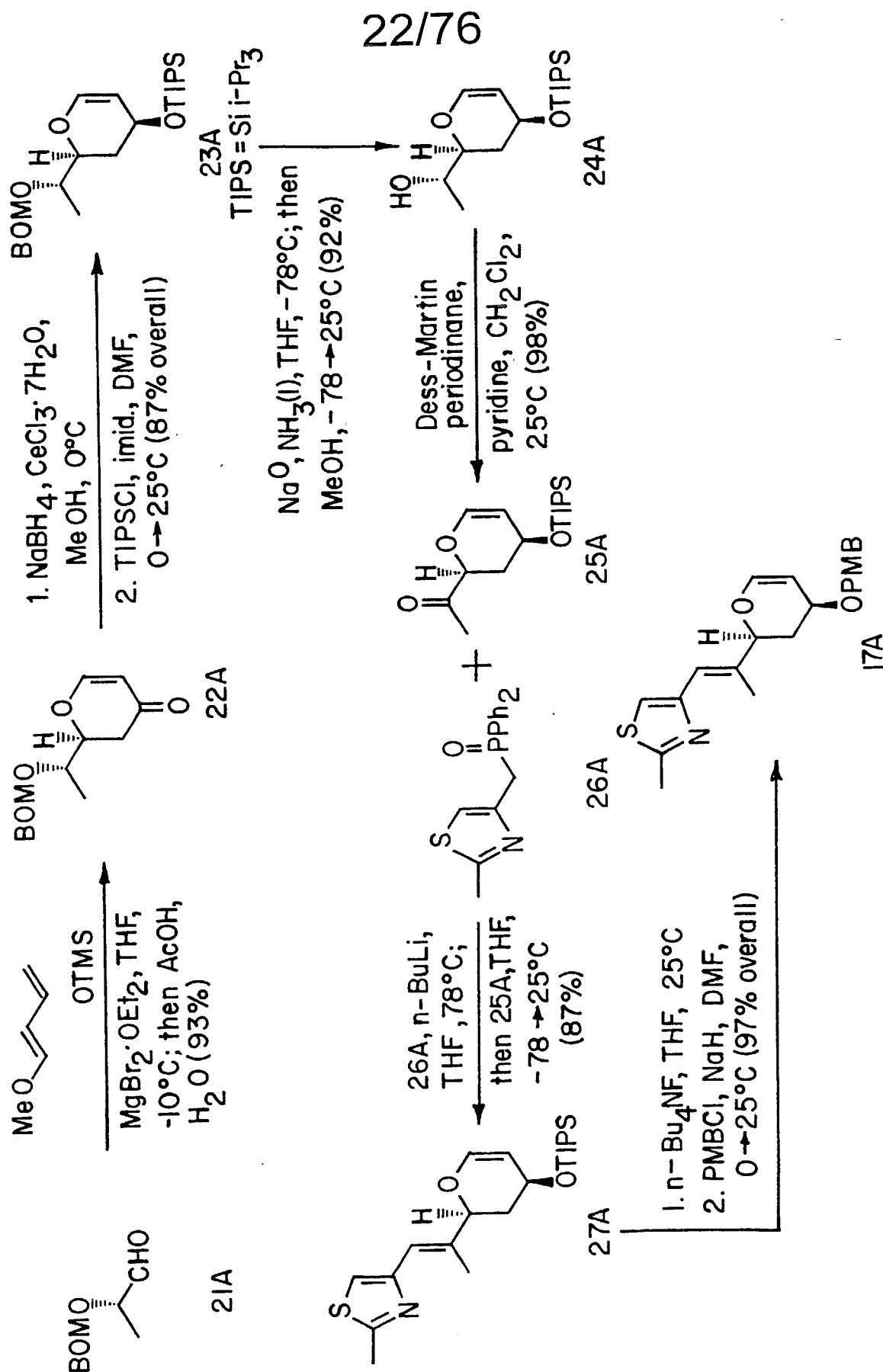


FIG. 15



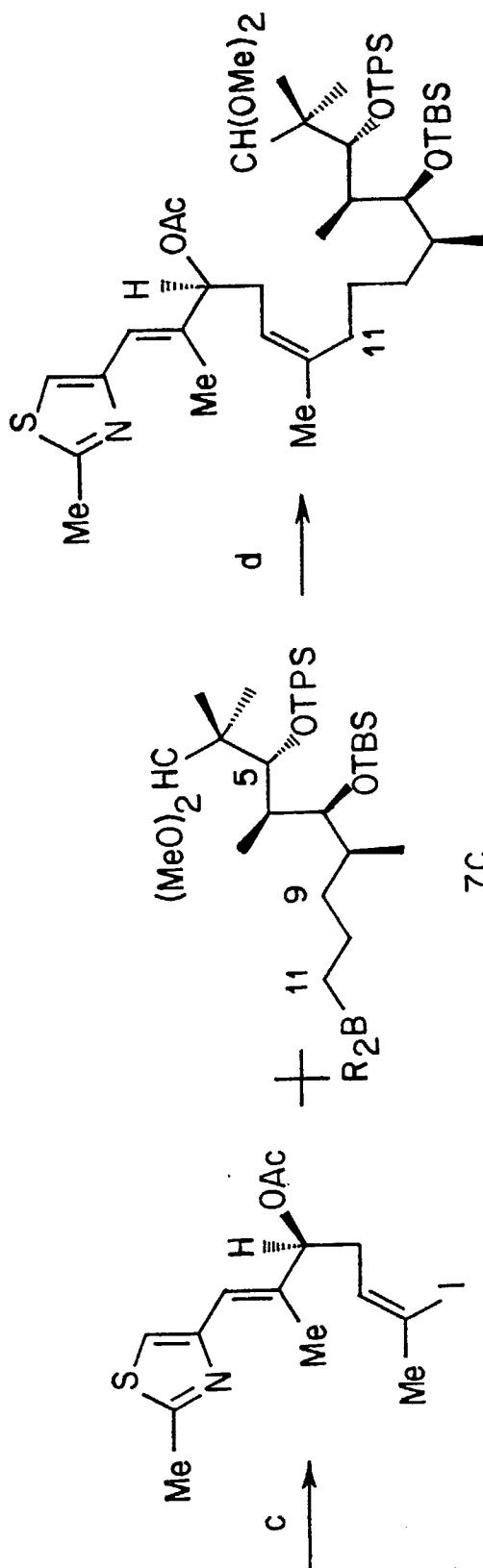
[illegible]

FIG. 17

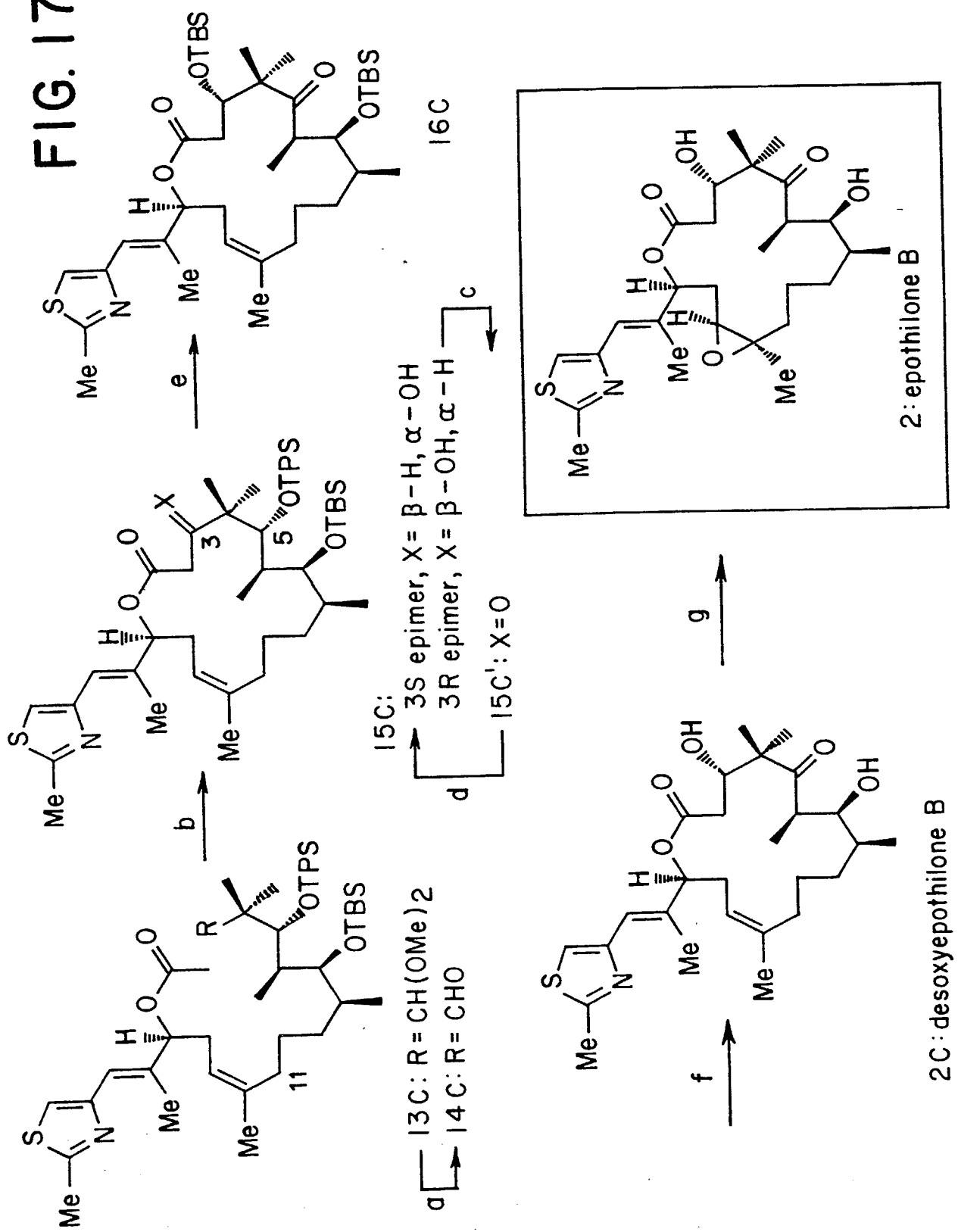


FIG. 18B

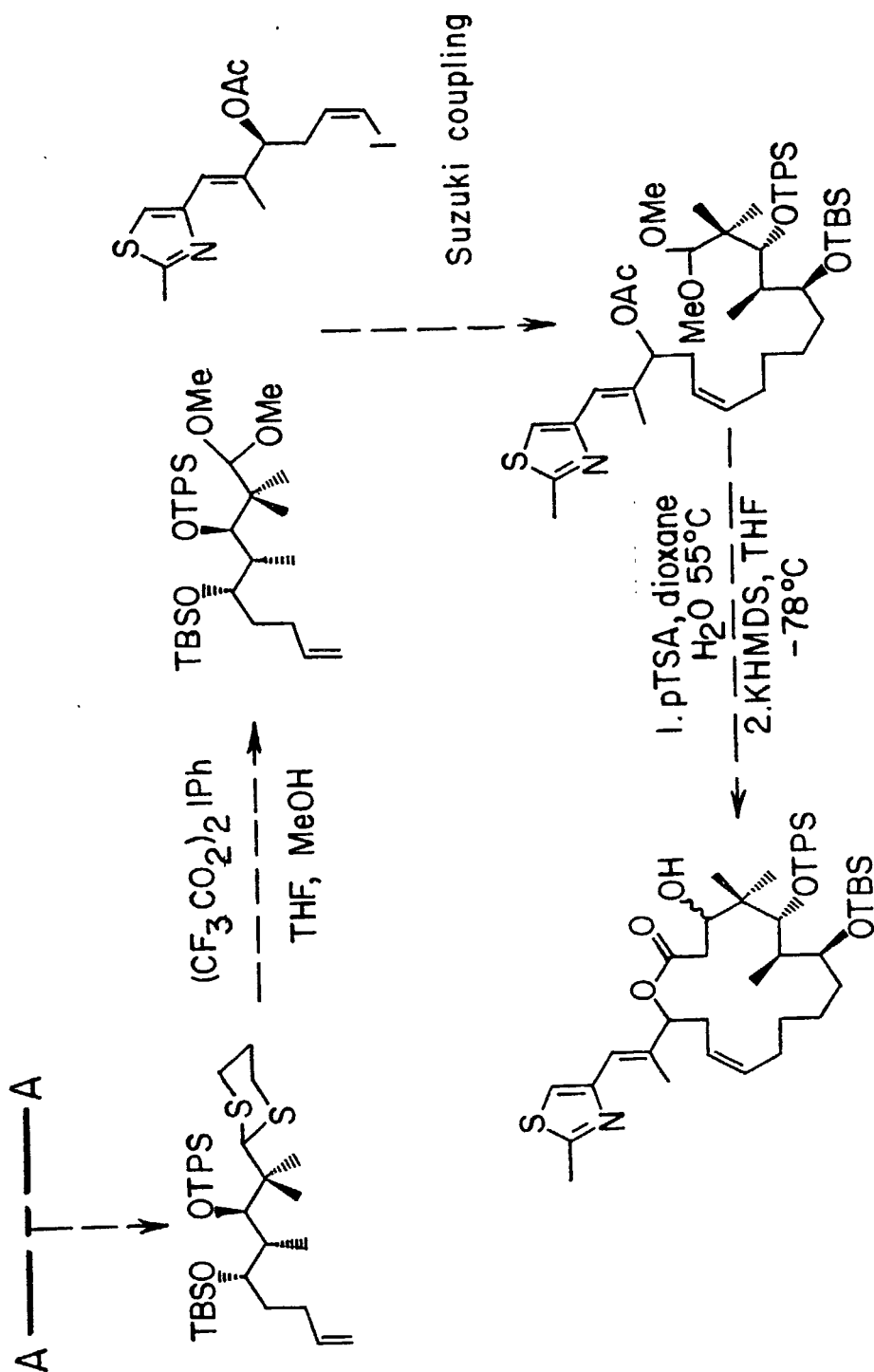
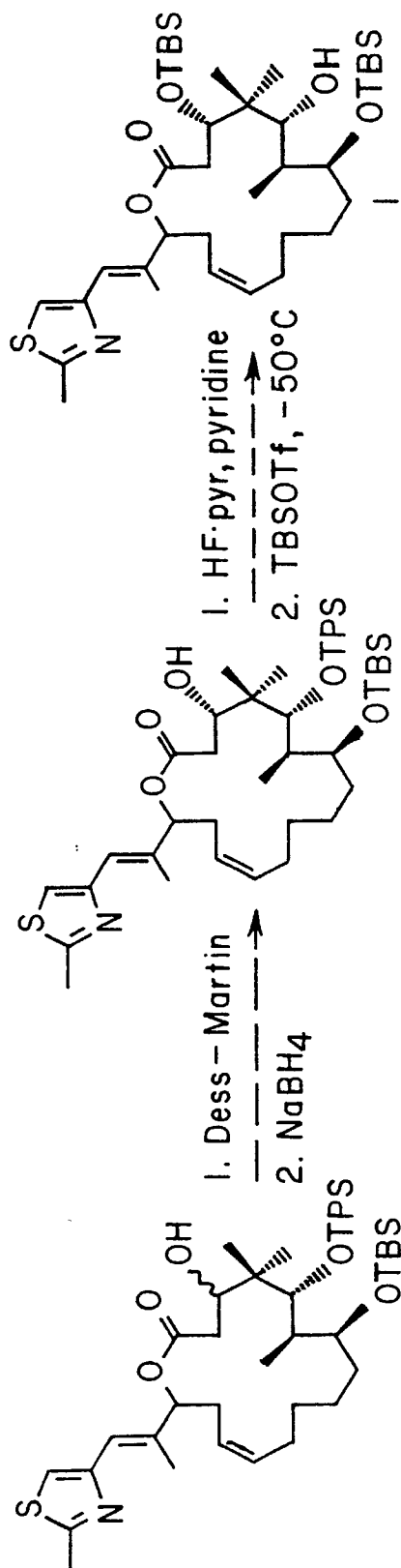
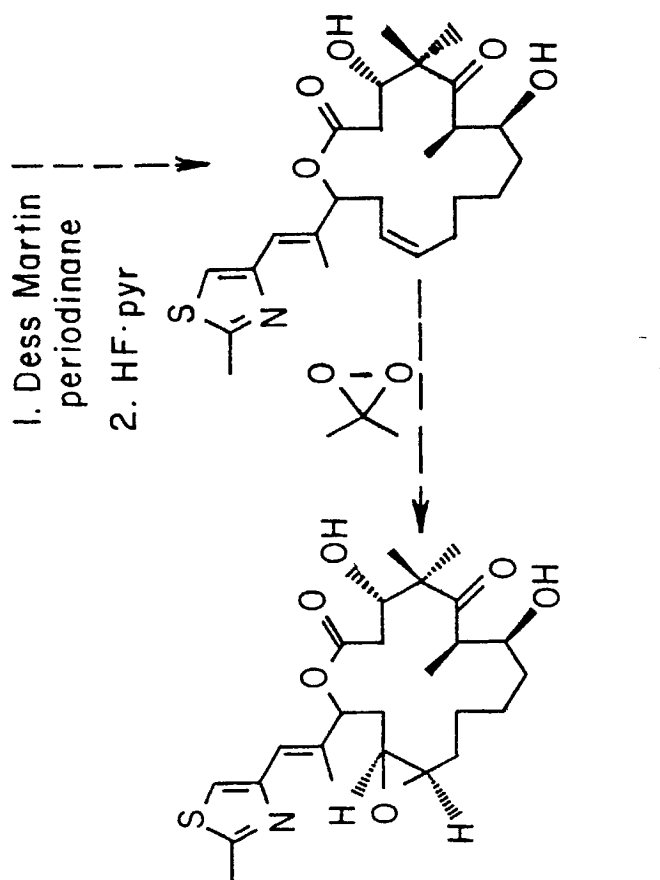


FIG. 19A



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FIG. 19B



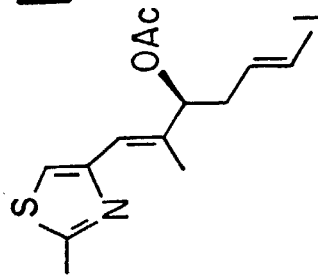


FIG. 19C

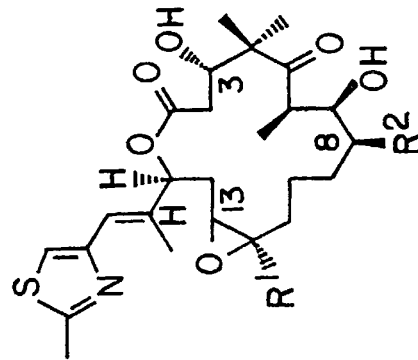
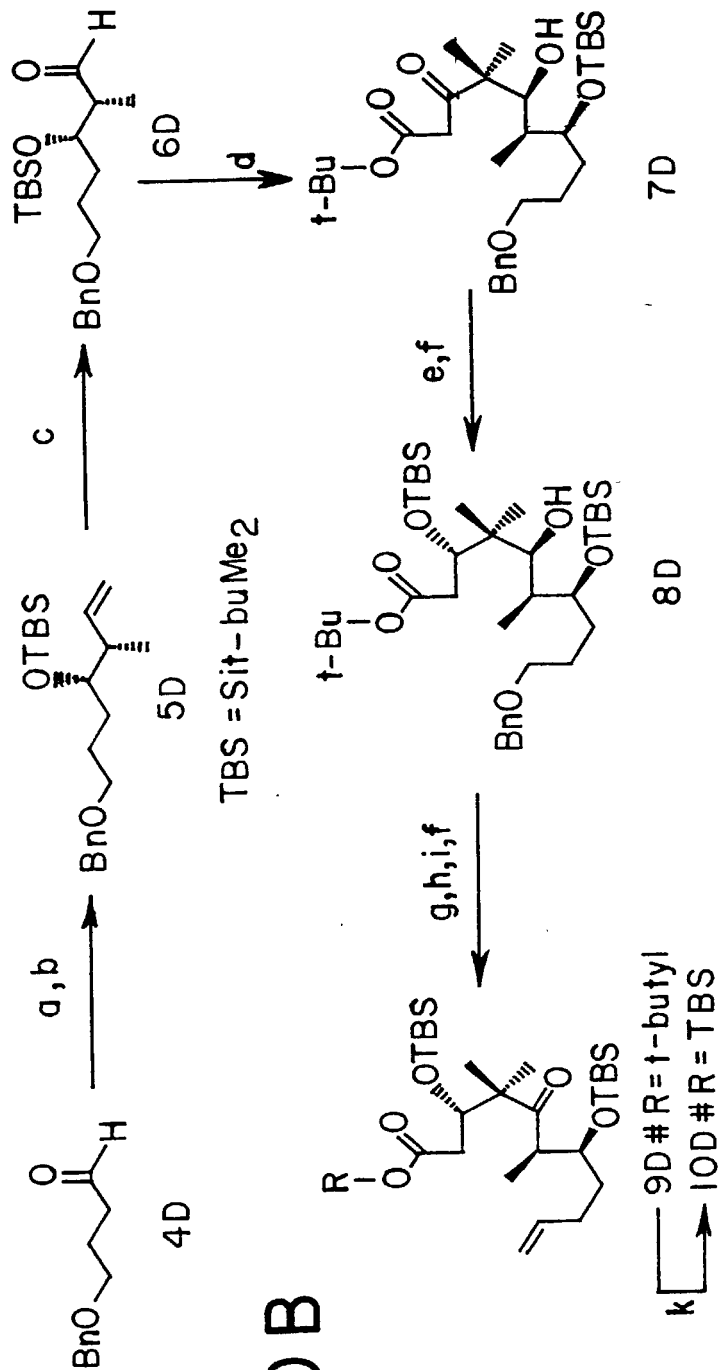
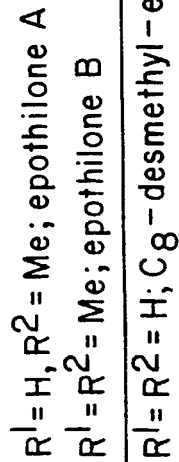


FIG. 20A



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FIG. 21

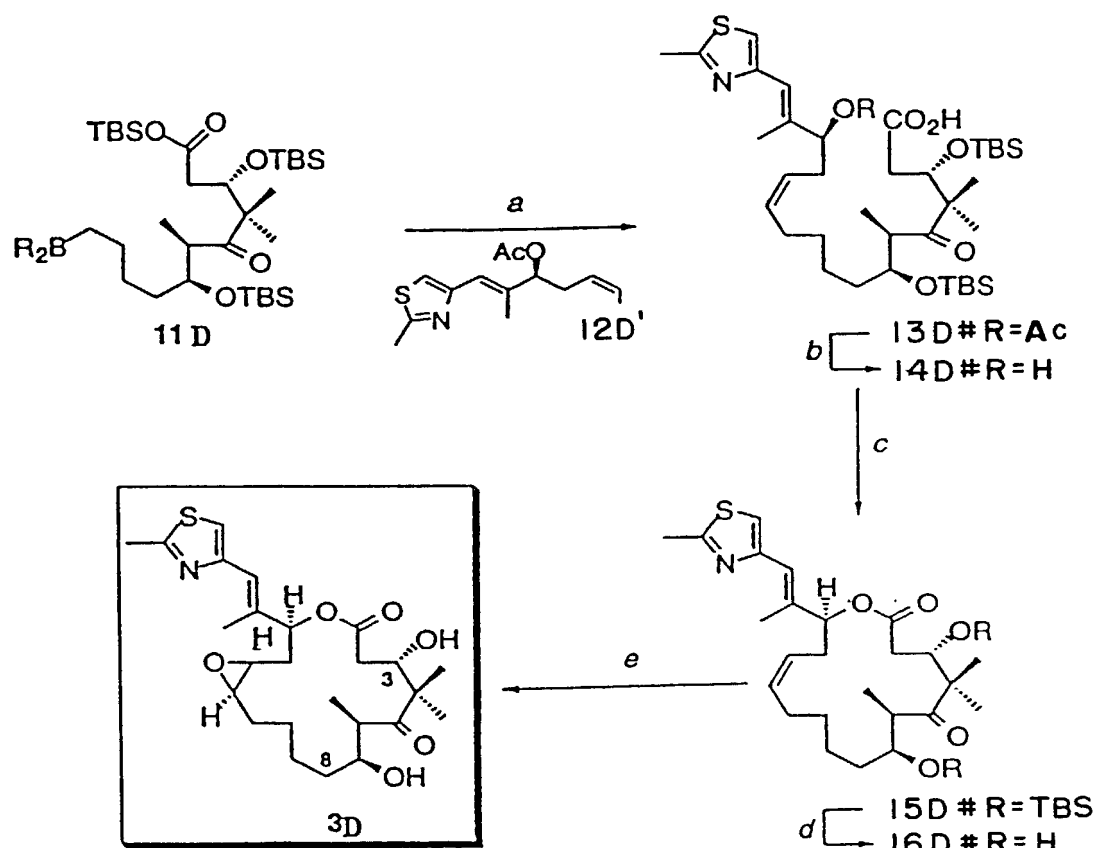
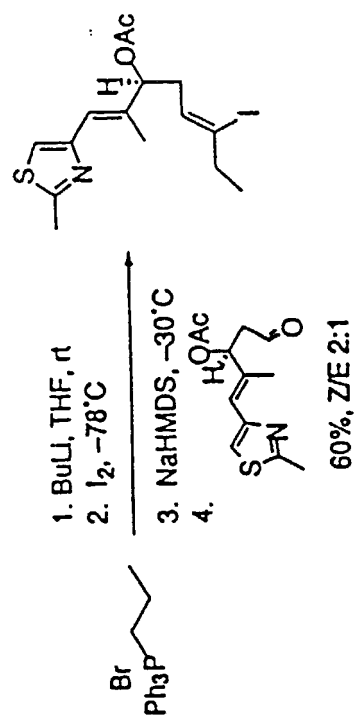


FIG. 22A



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FIG. 22 B

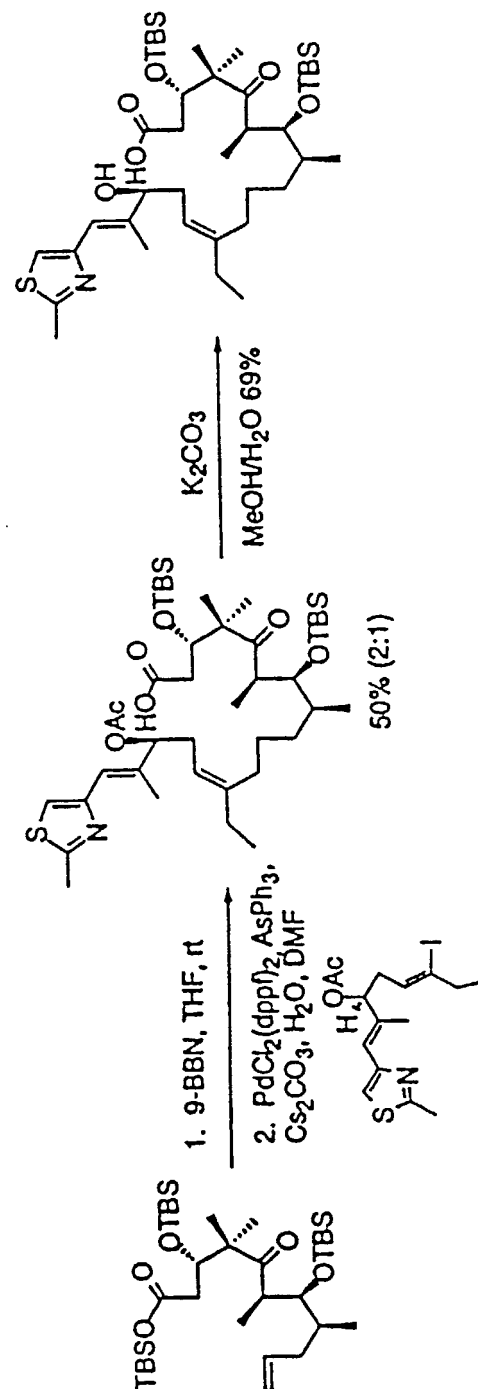
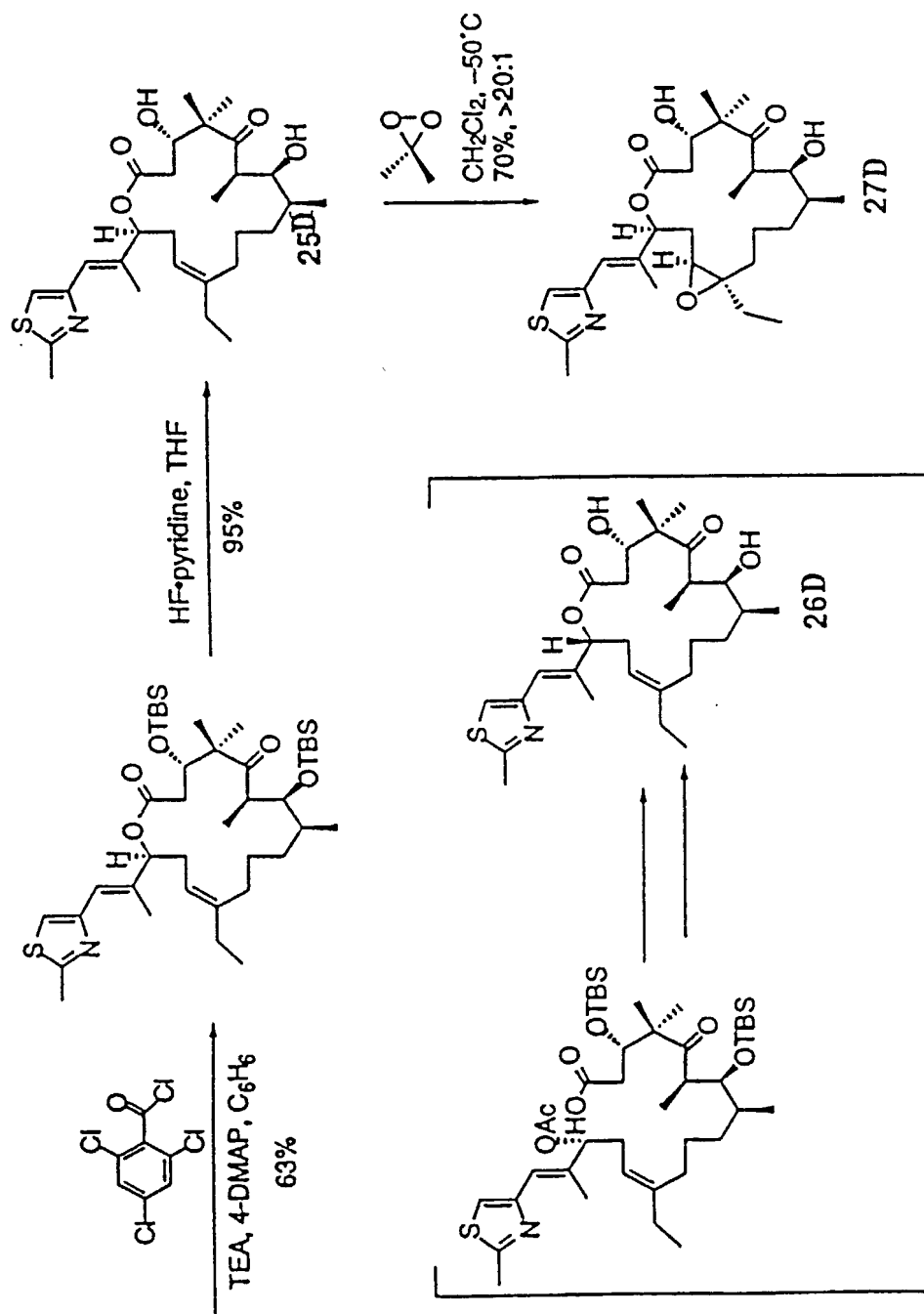
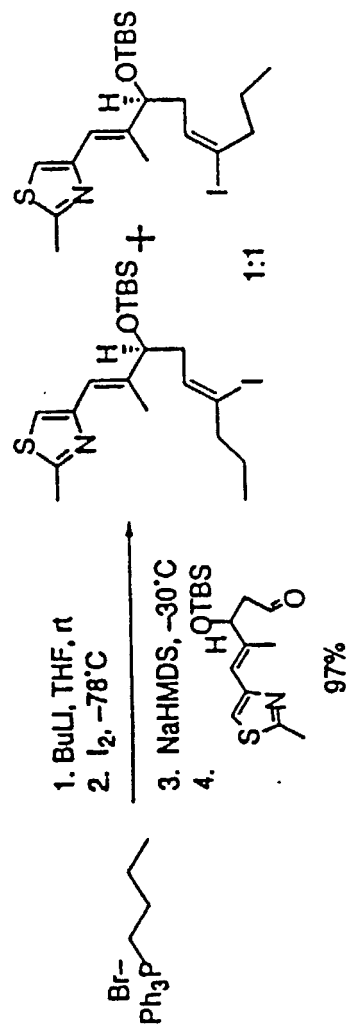


FIG. 22C



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FIG. 23A



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FIG. 23B

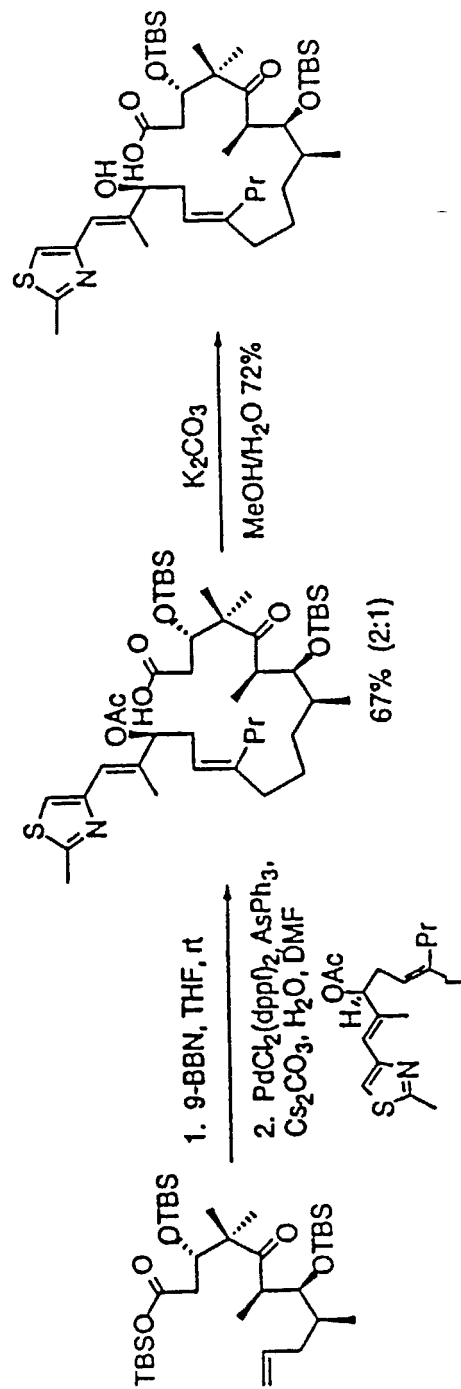


FIG. 23C

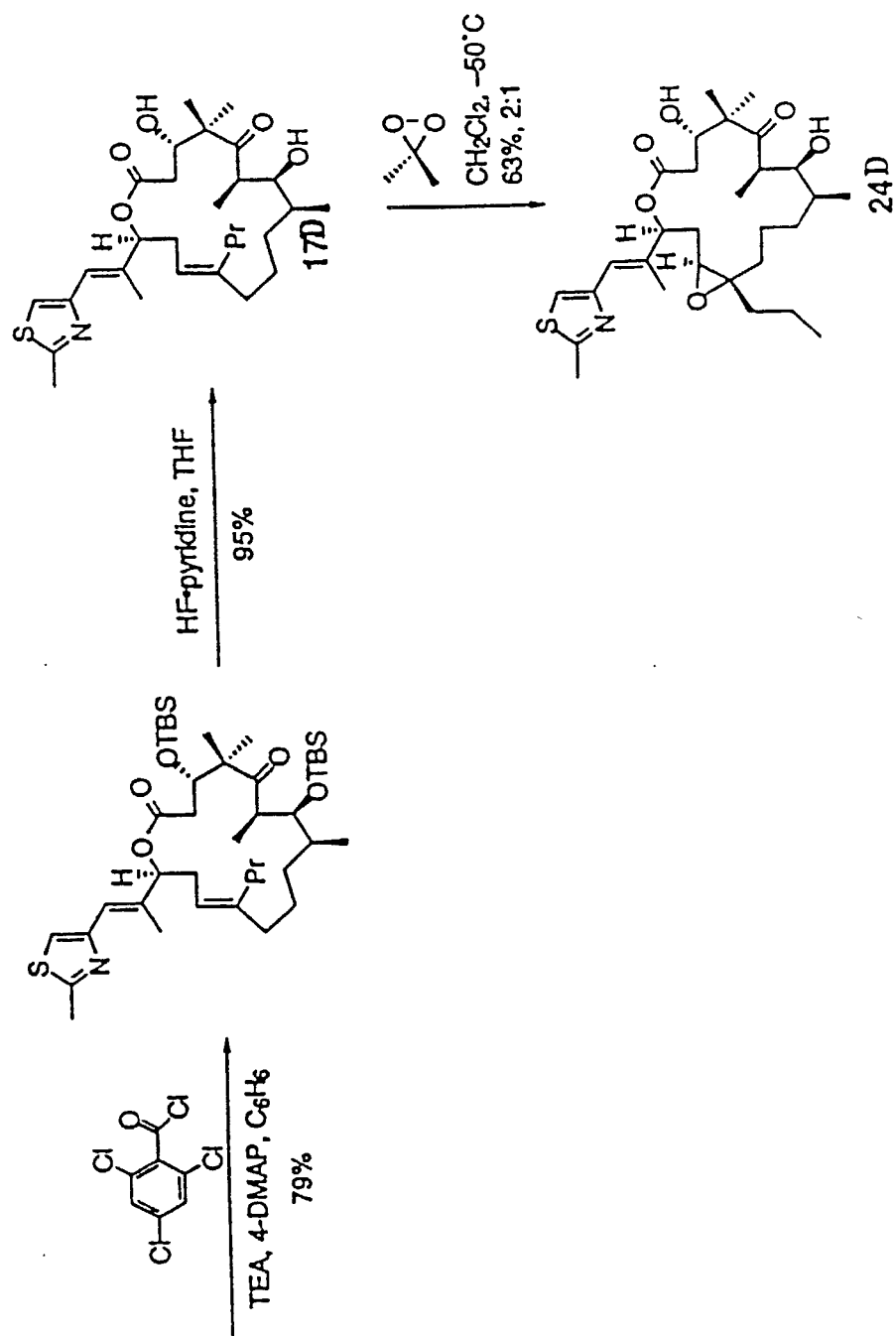
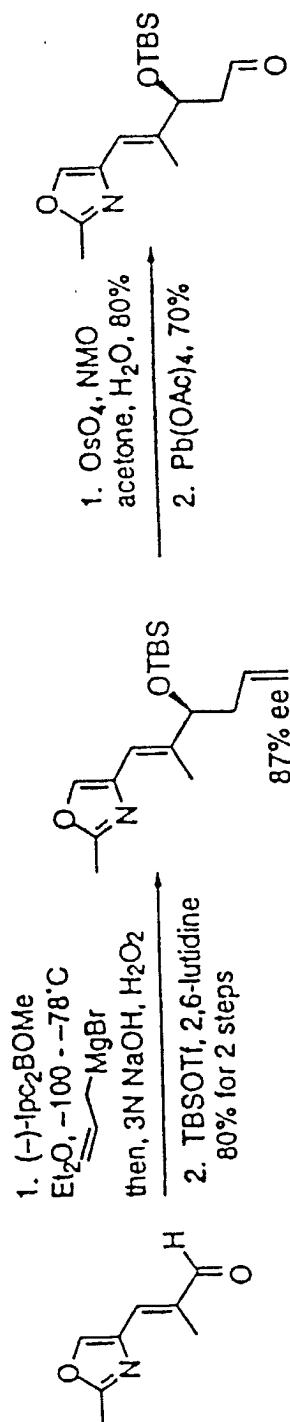


FIG. 25A



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FIG. 25B

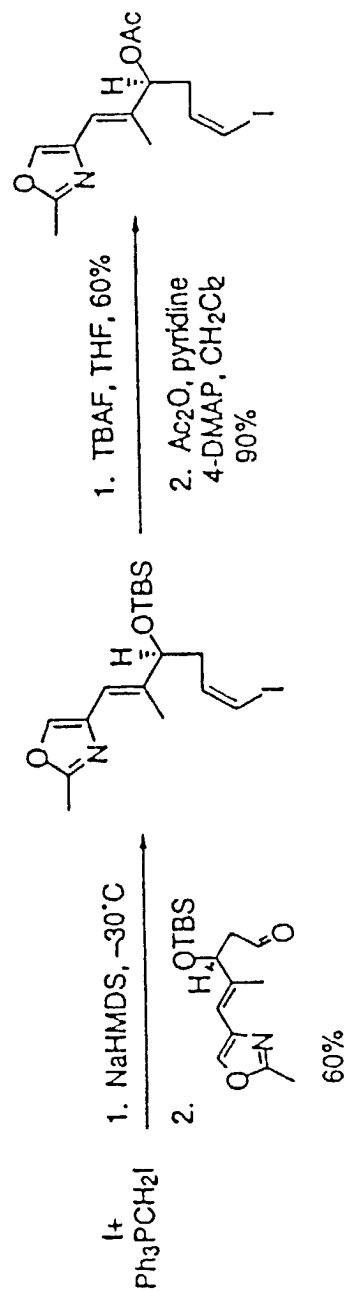


FIG. 25C

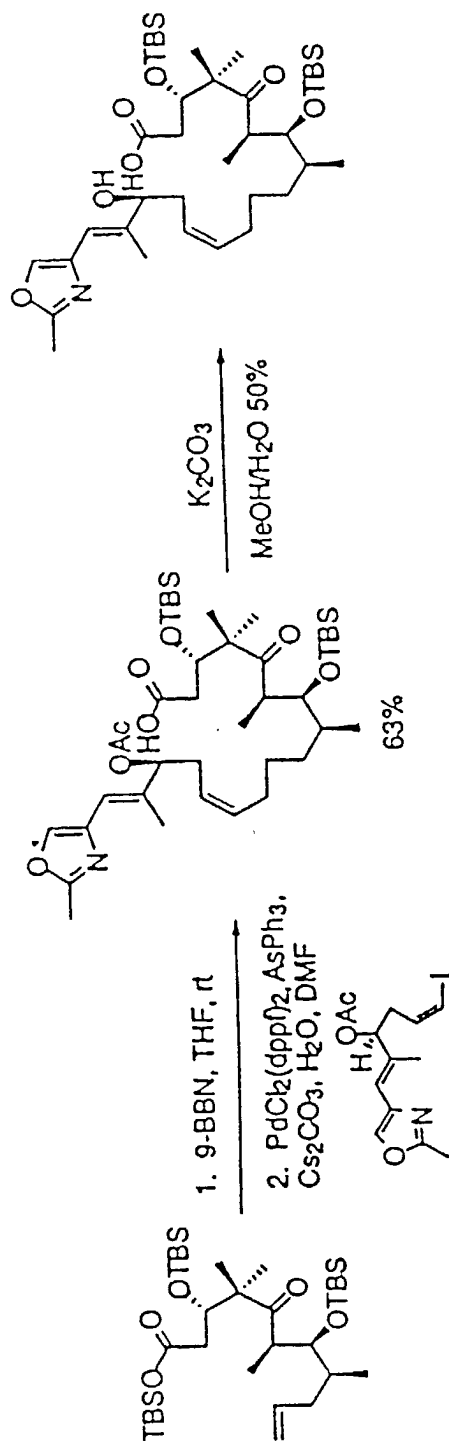


FIG. 25D

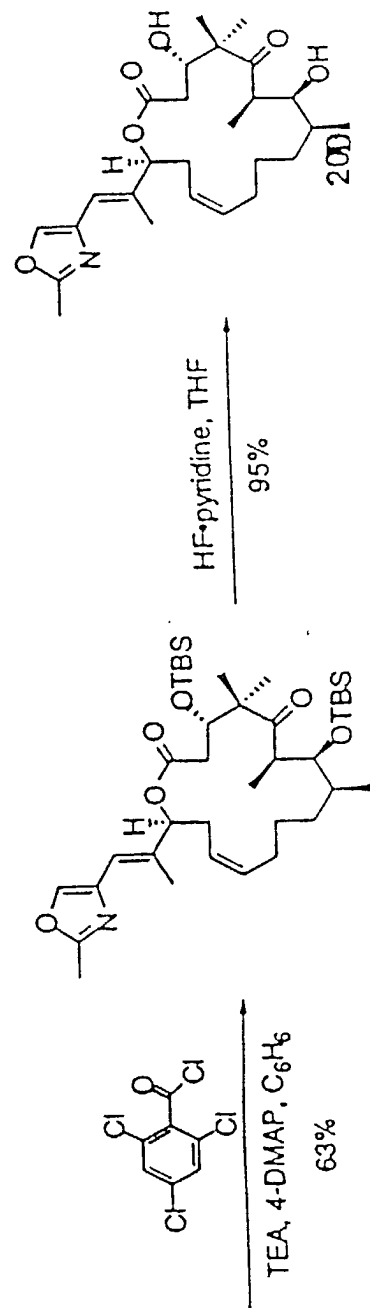
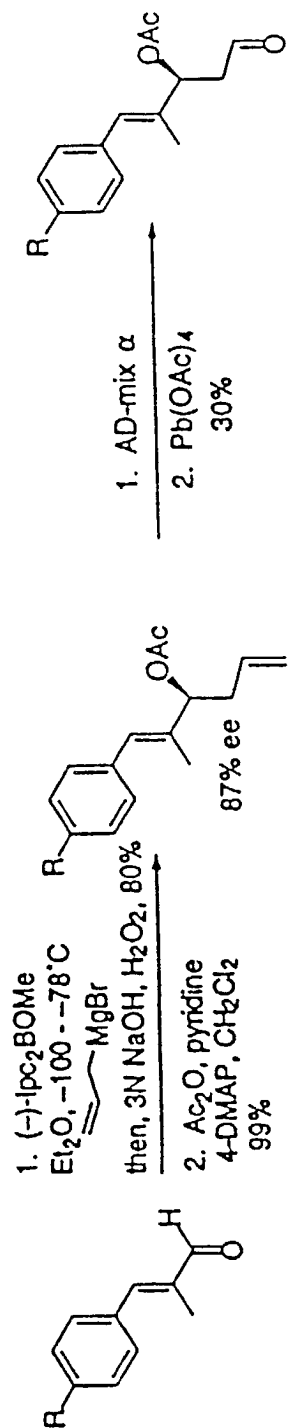
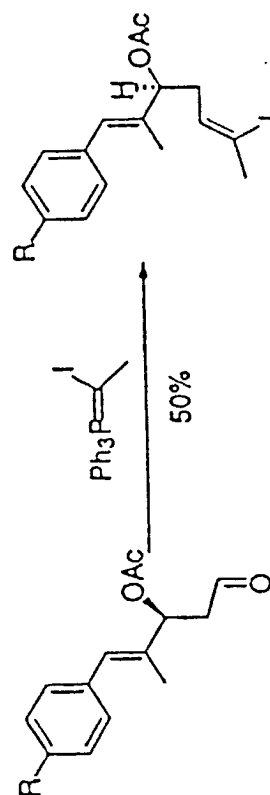


FIG. 26A



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FIG. 26B



R = H, F, CF_3
 R=H is the only compound
 completed, F and CF_3 are nearly
 completed

FIG. 26C

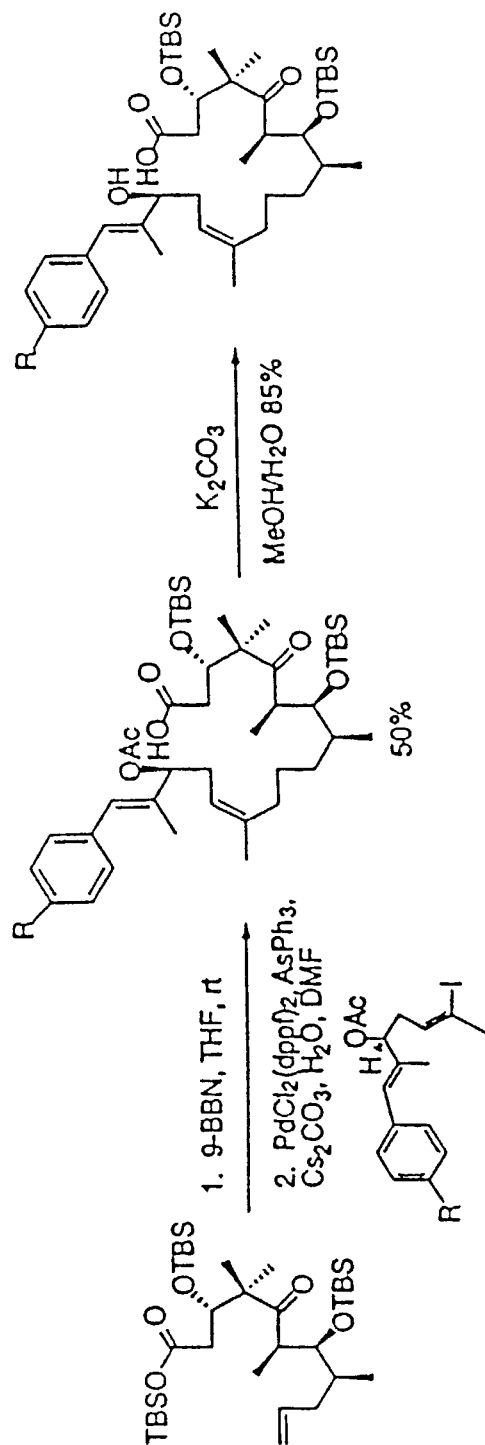


FIG. 26D

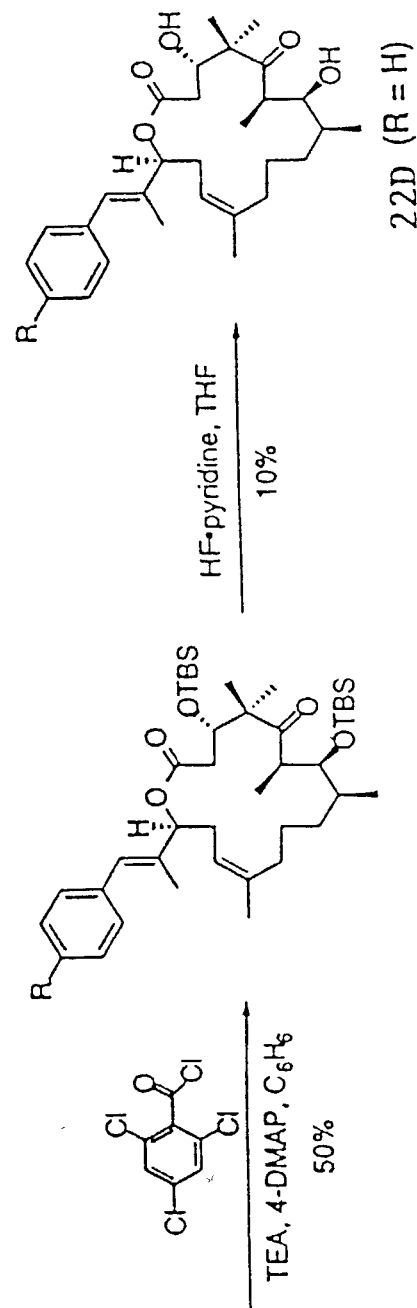


FIG. 27A

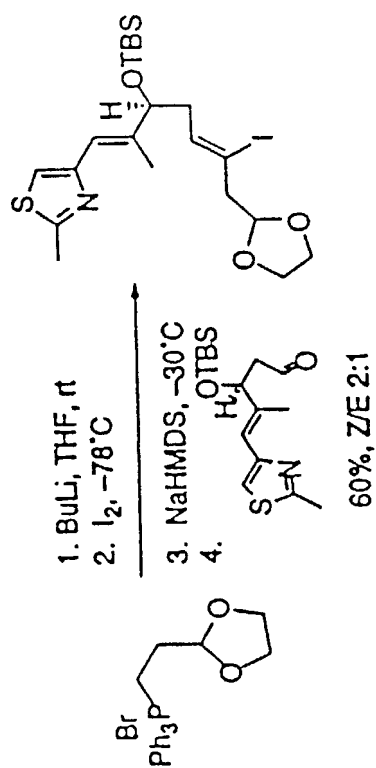
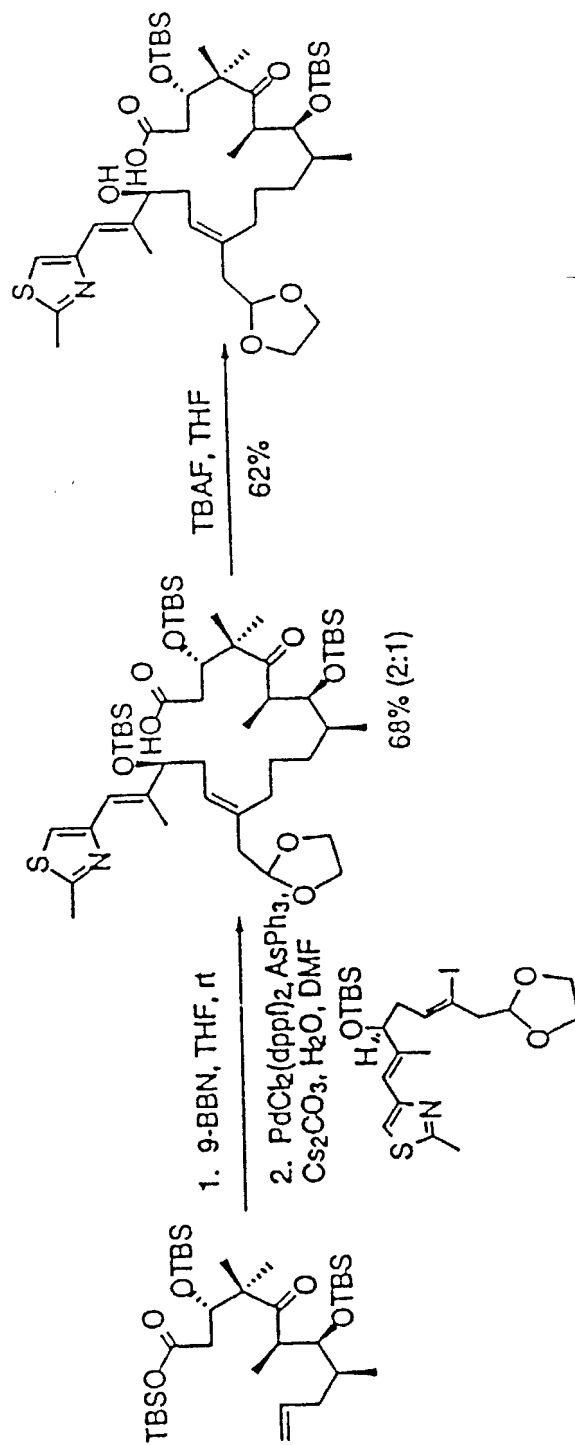
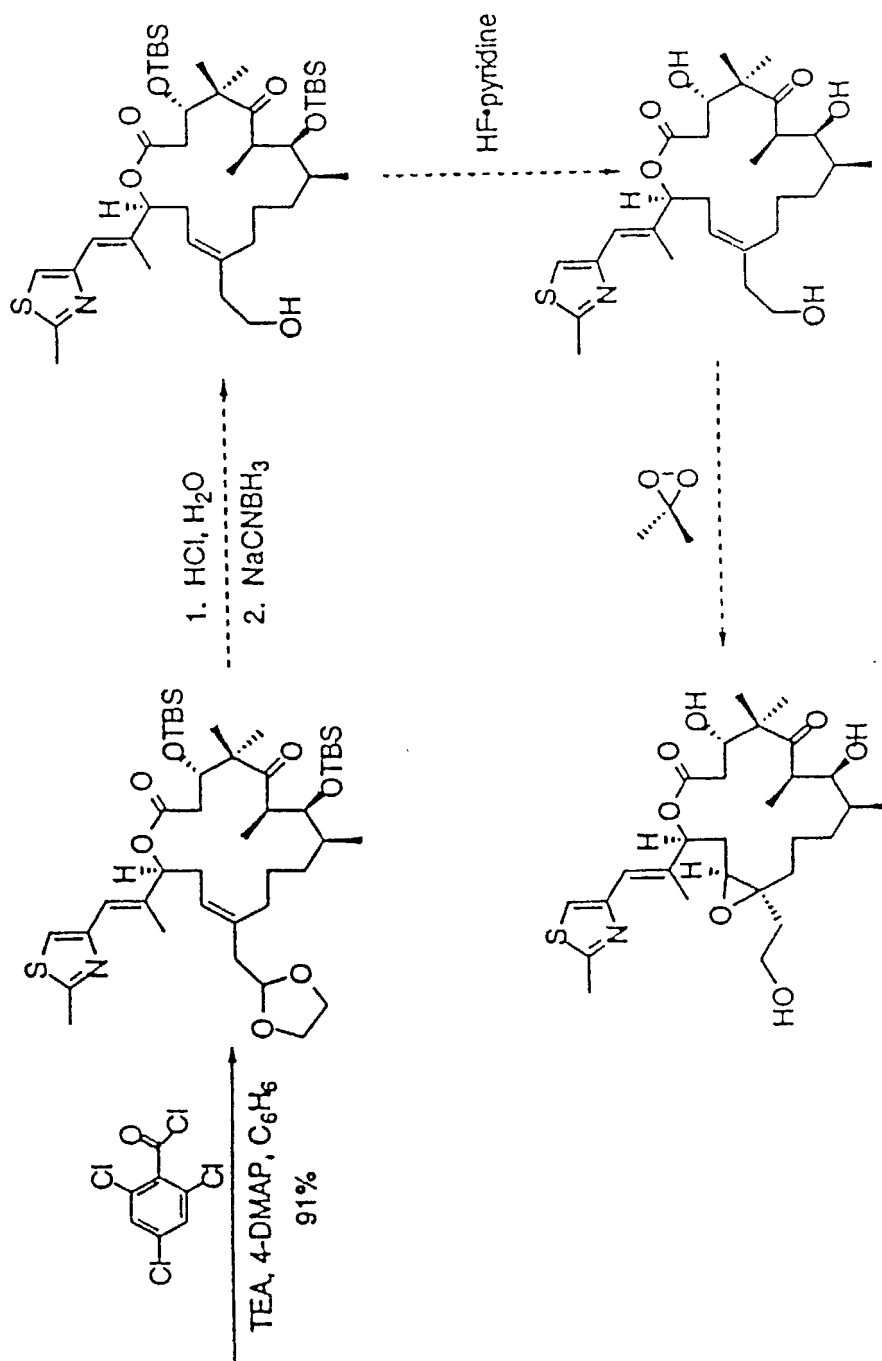


FIG. 27B



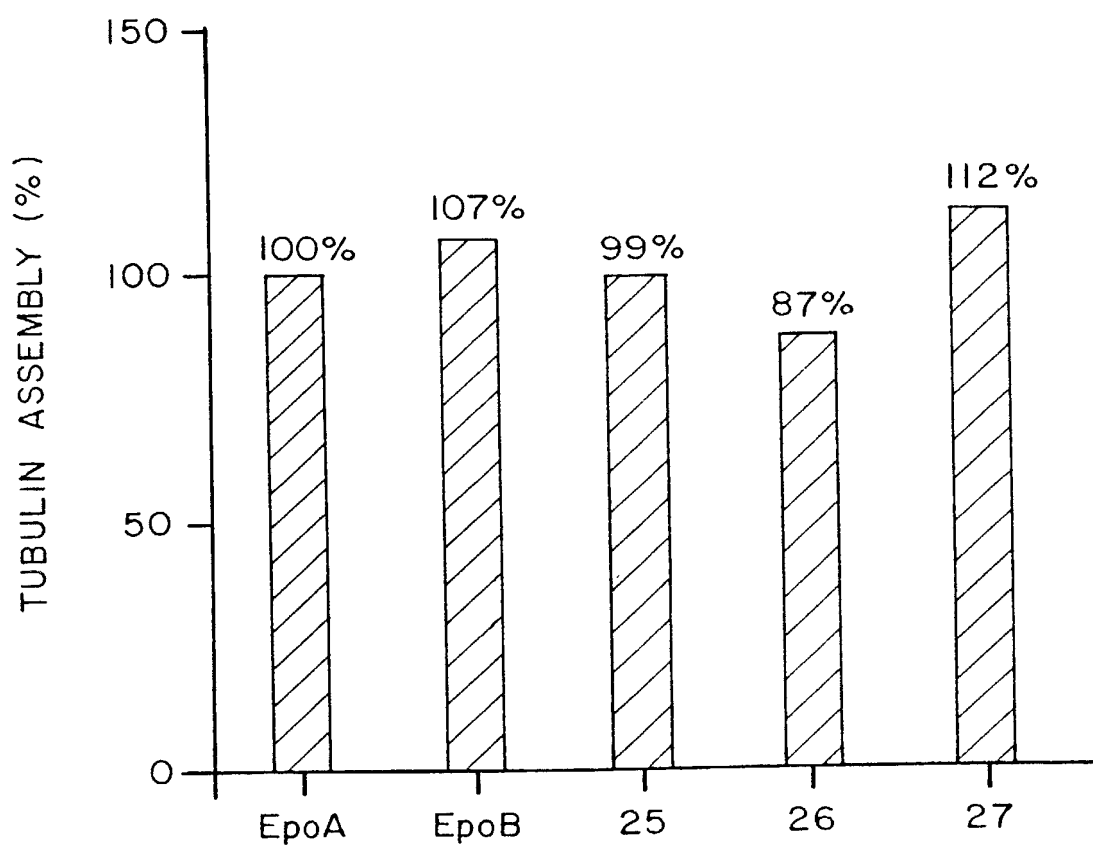
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FIG. 27C



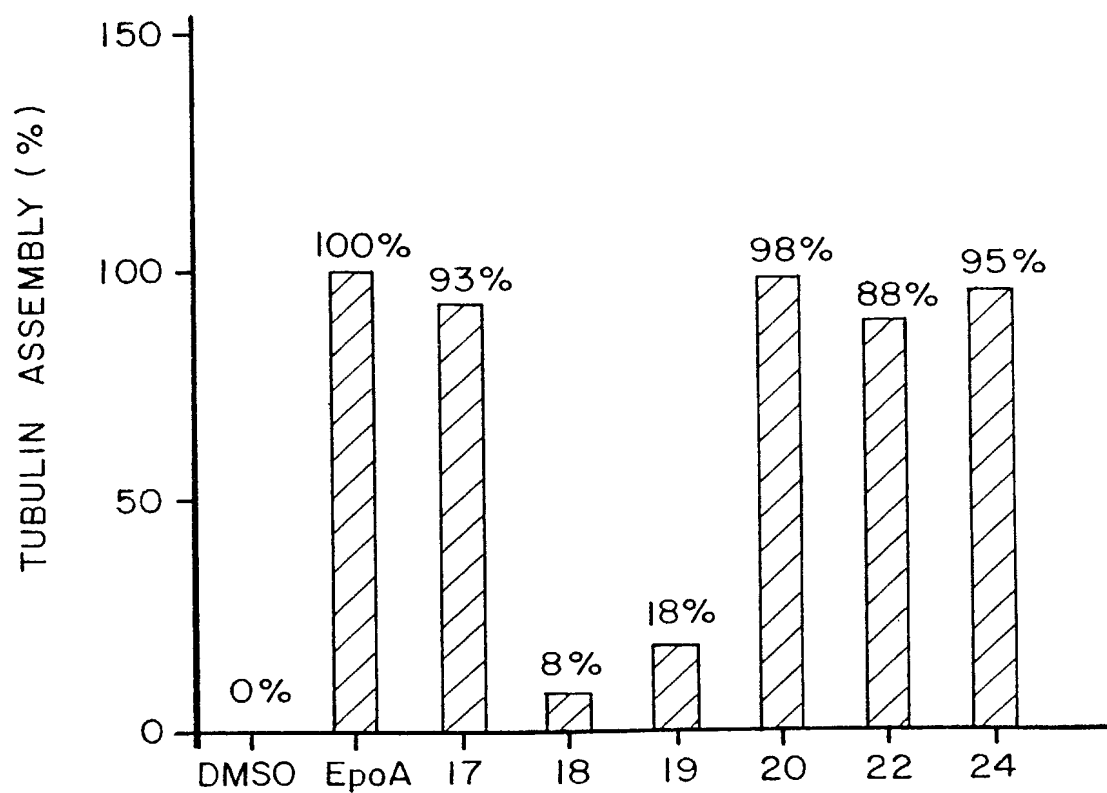
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FIG. 28A



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FIG. 28B



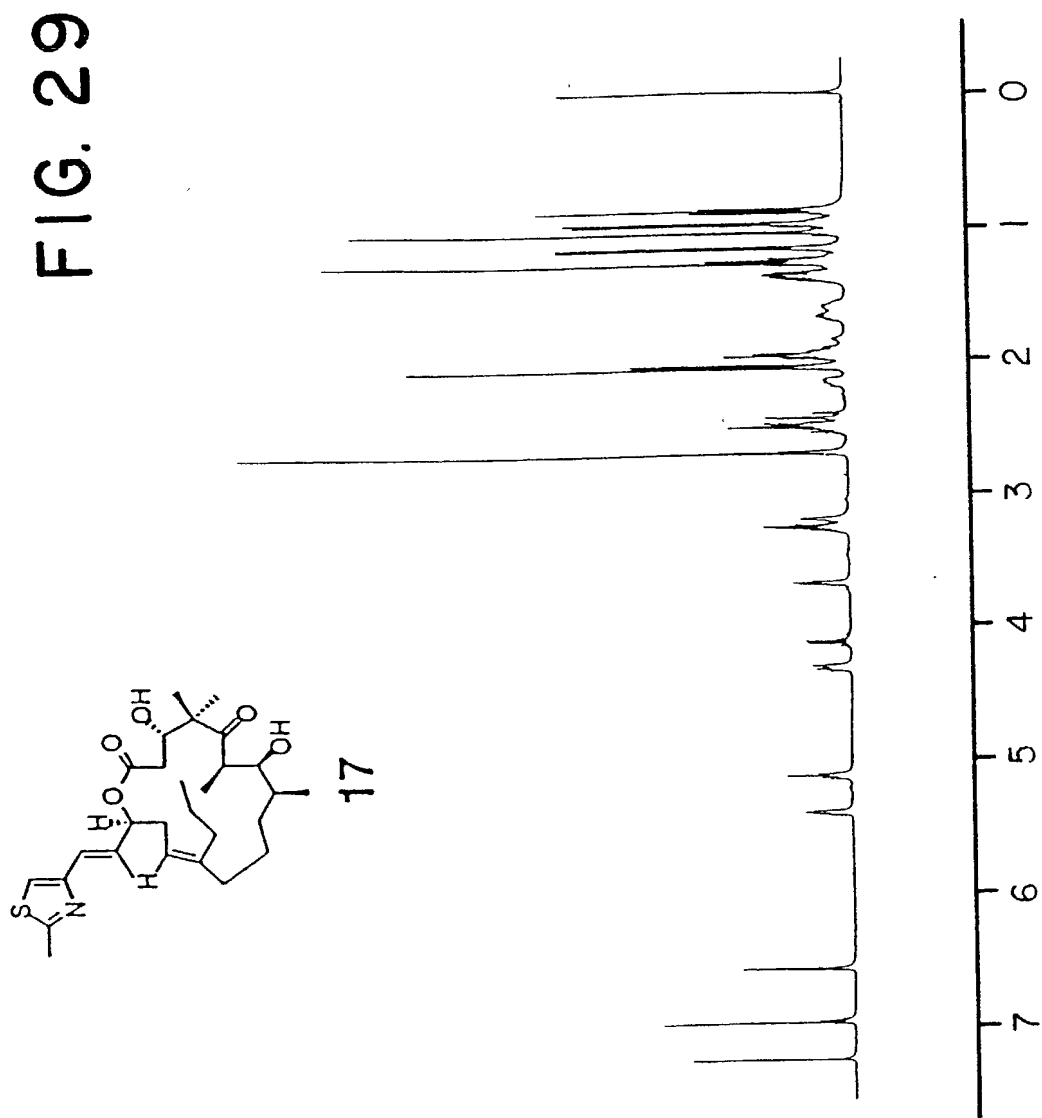


FIG. 30

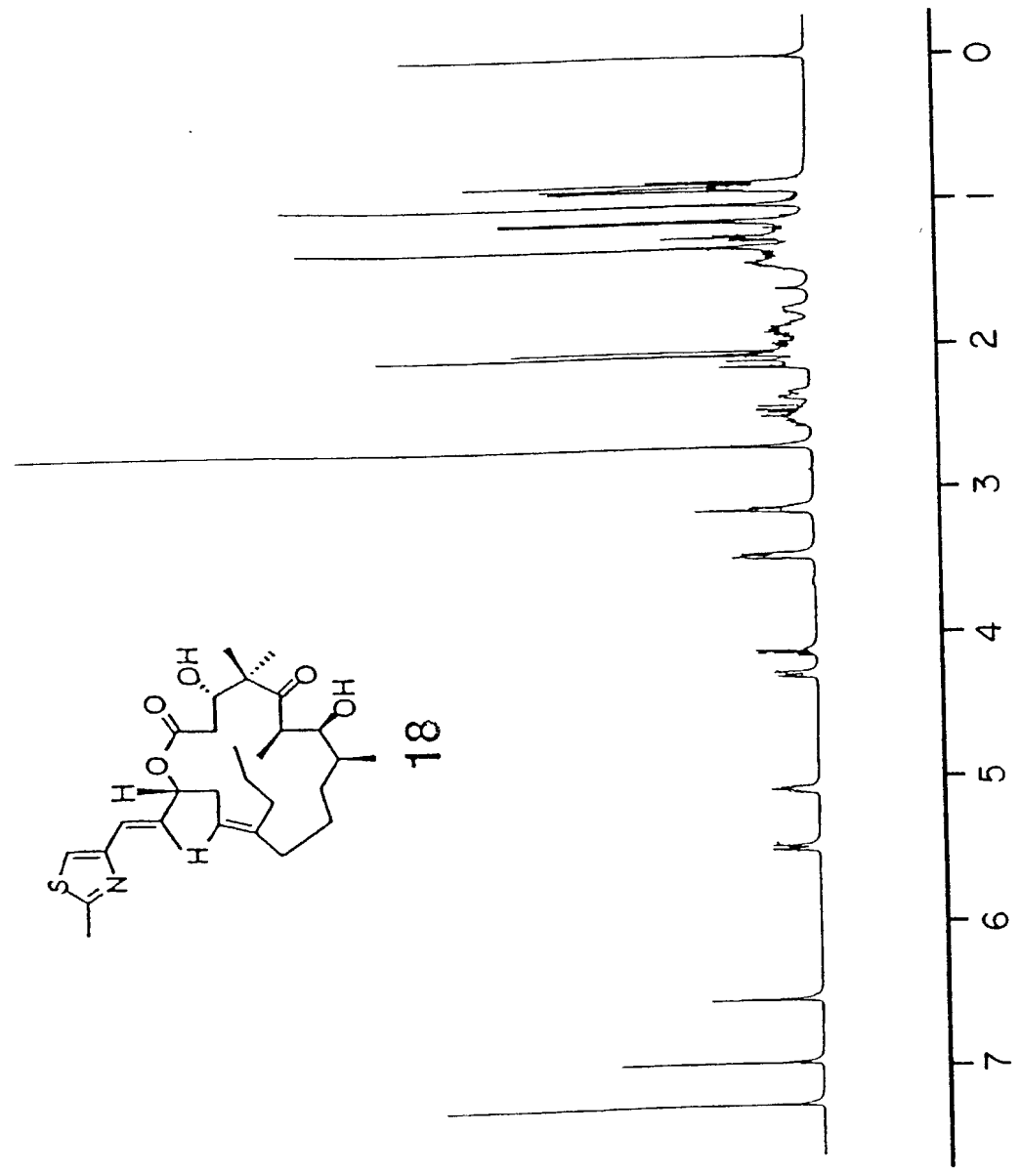


FIG. 31

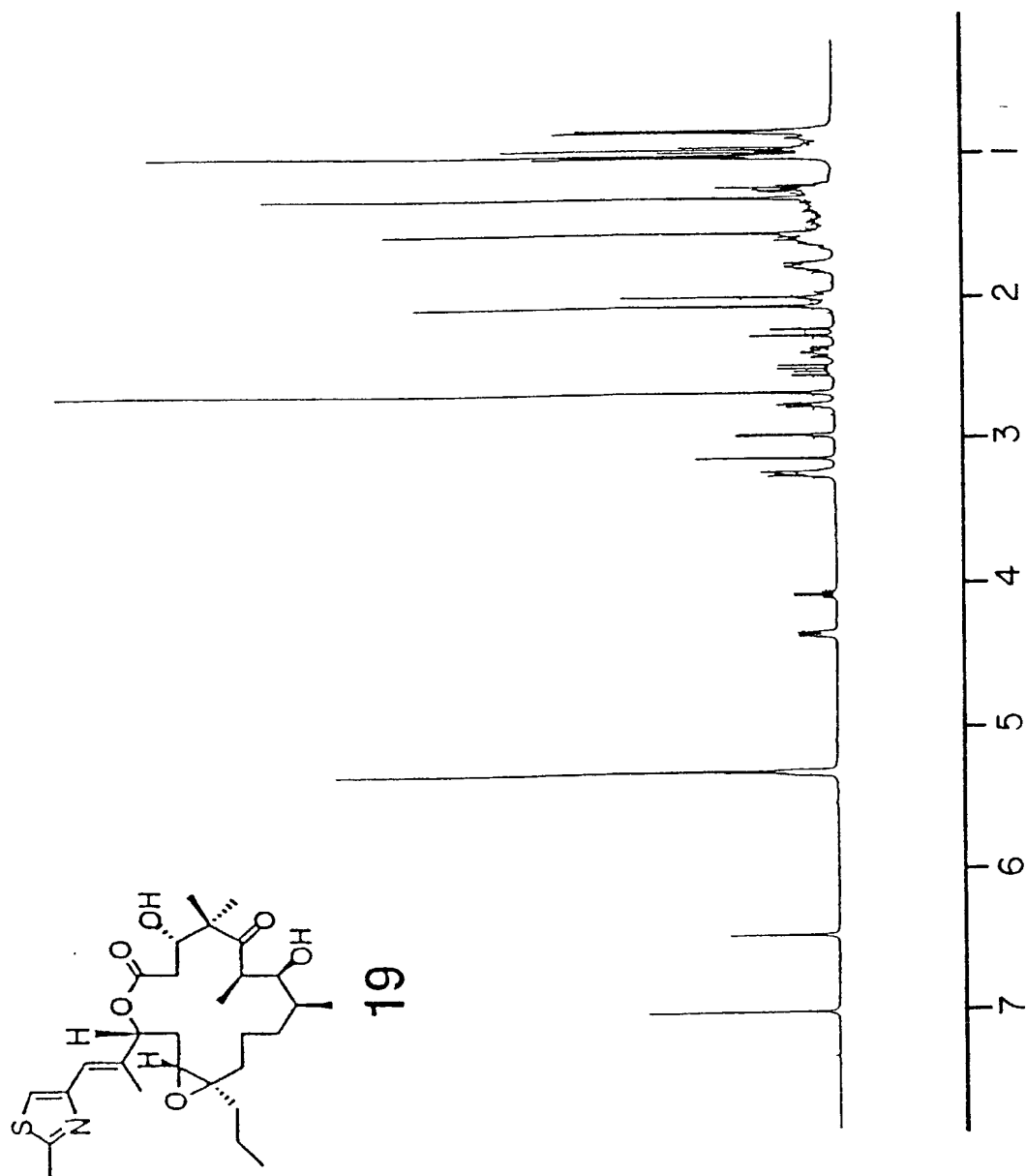
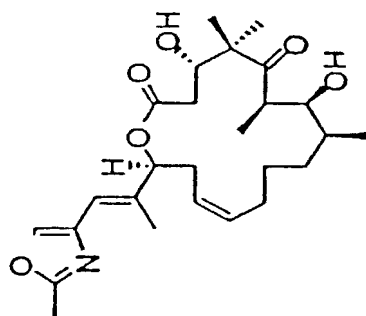


FIG. 32



20

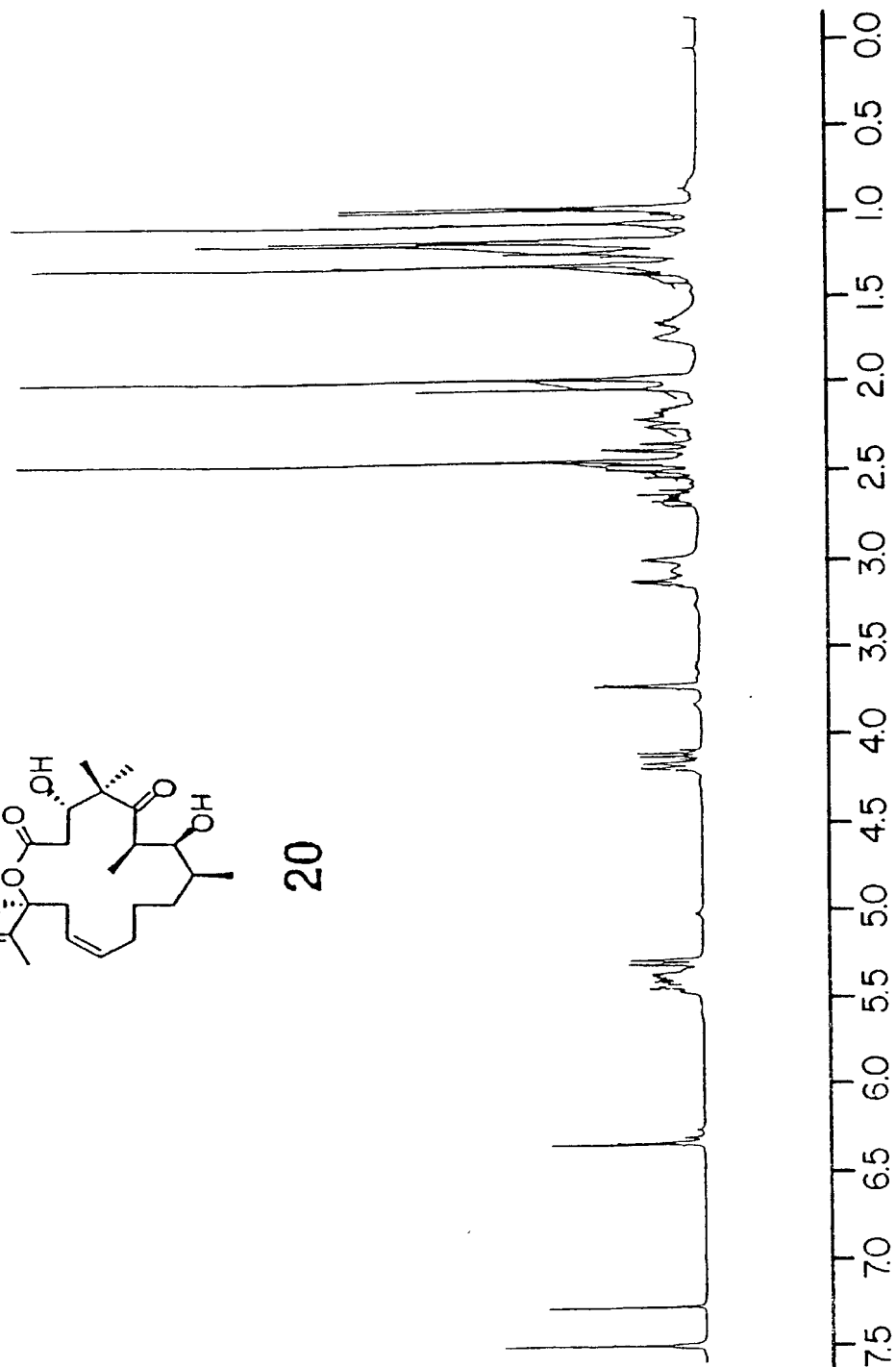
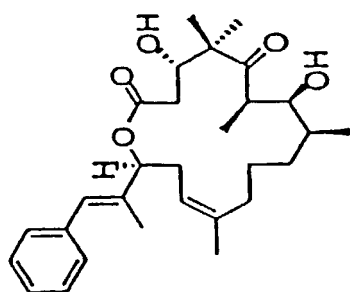
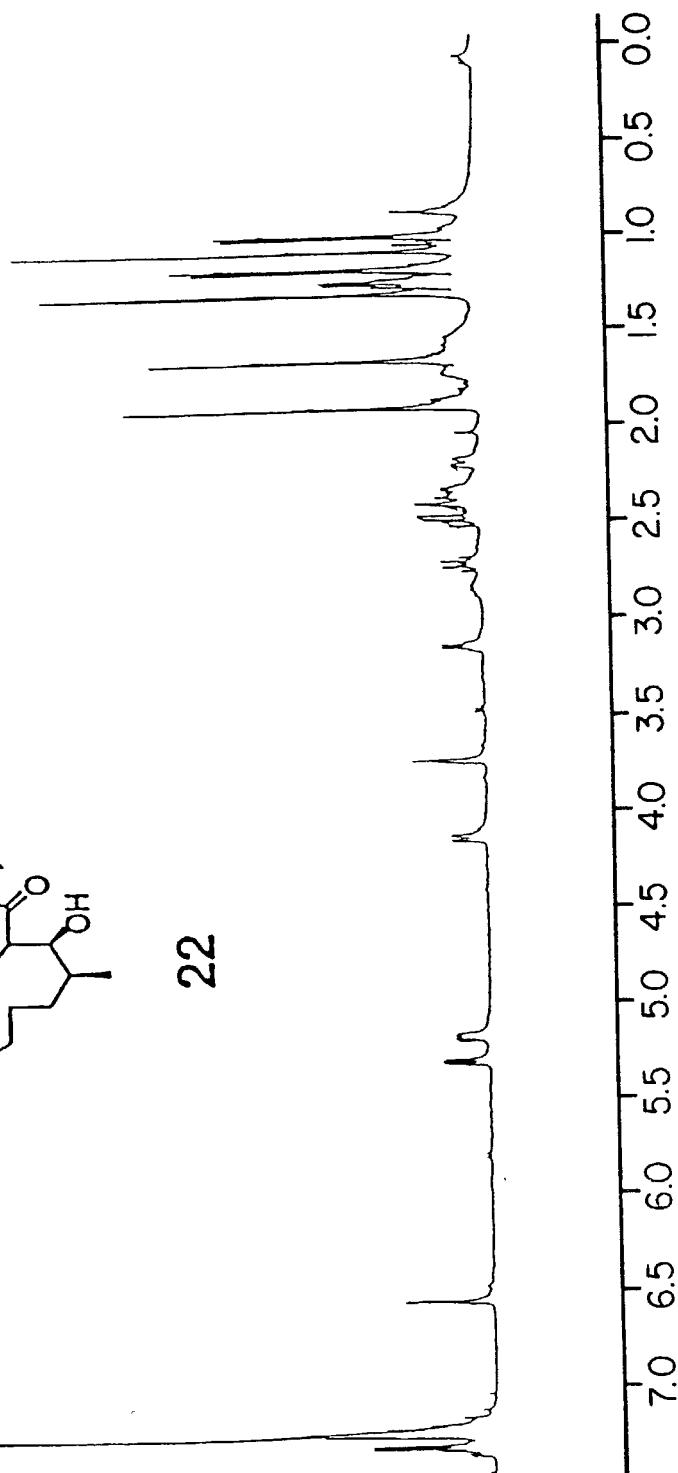


FIG. 33



22



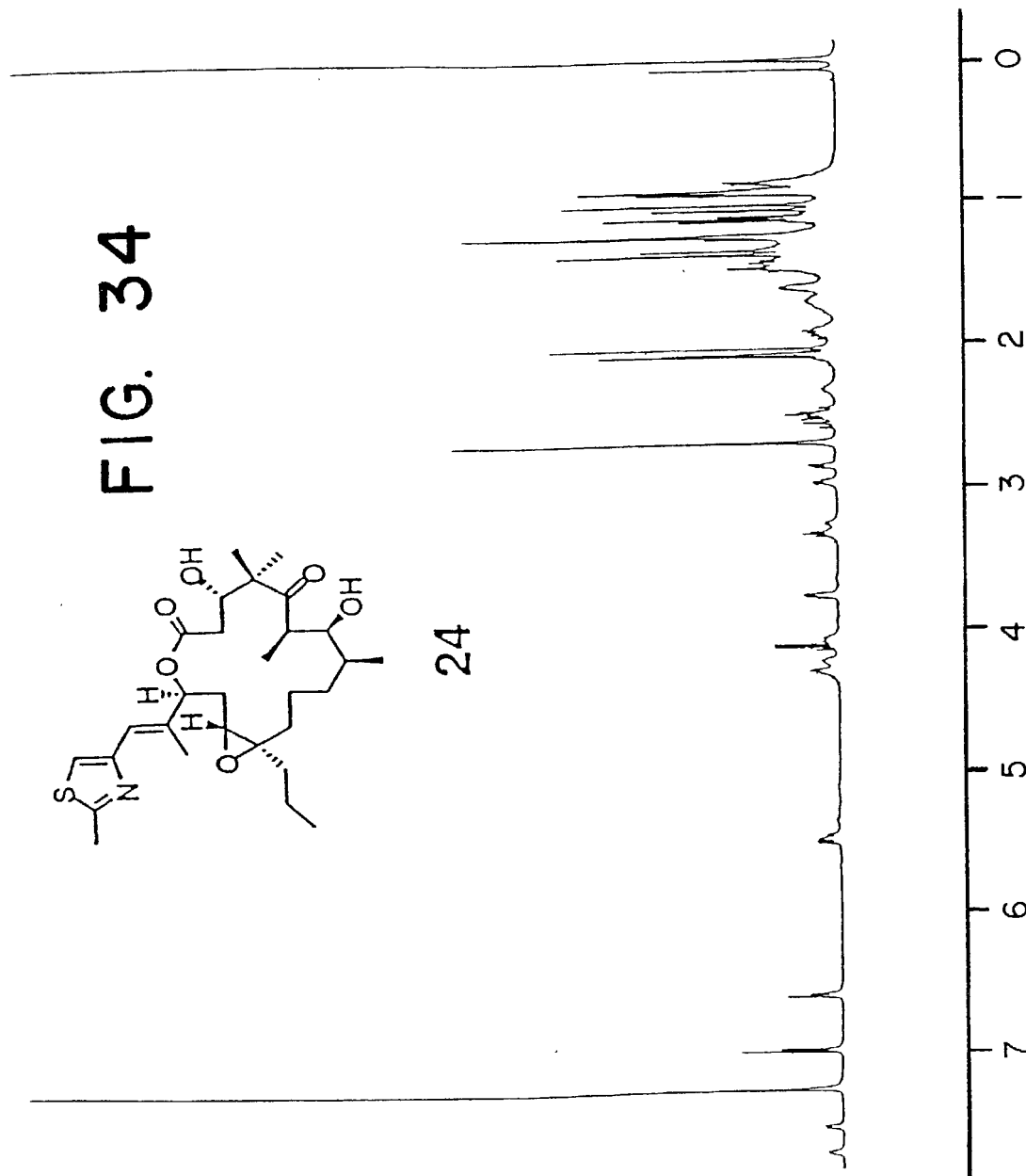
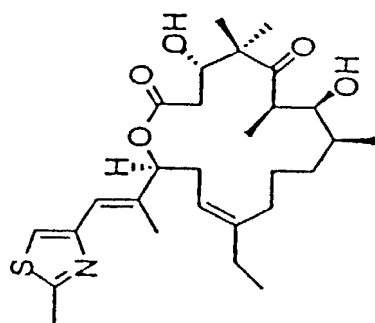


FIG. 35



25

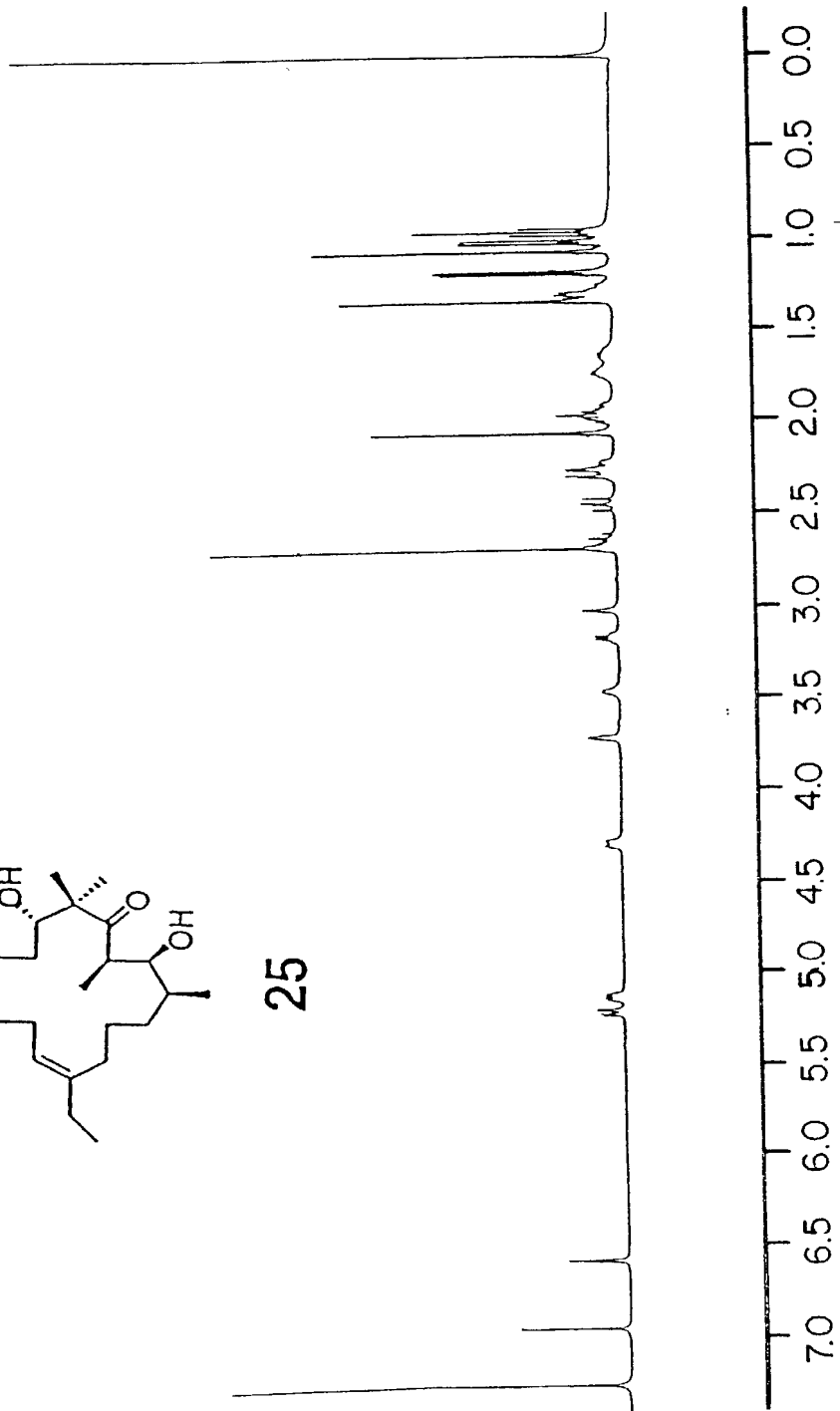
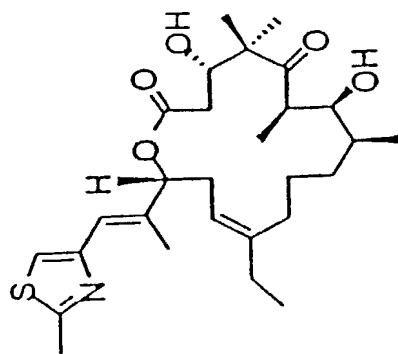


FIG. 36



26

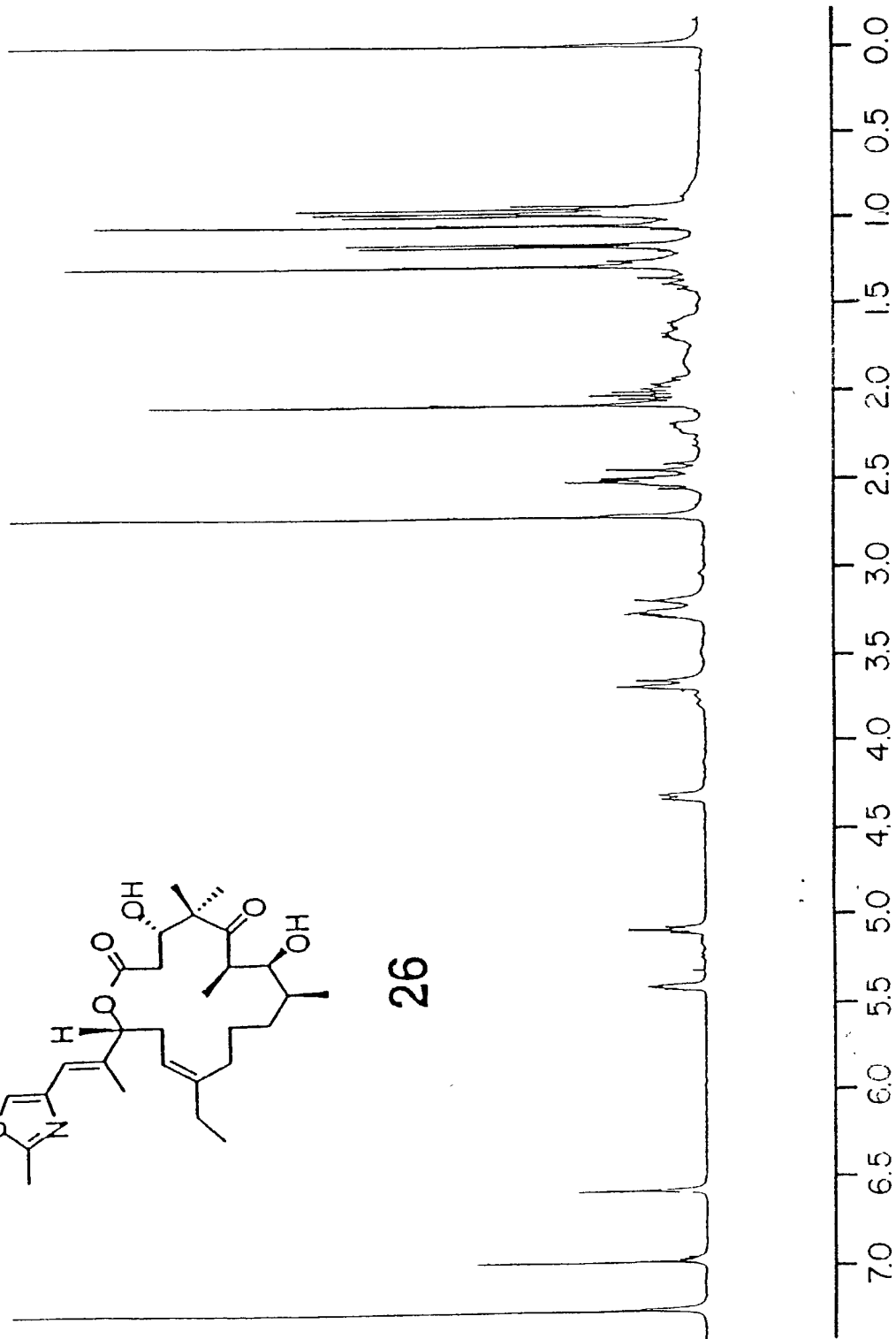
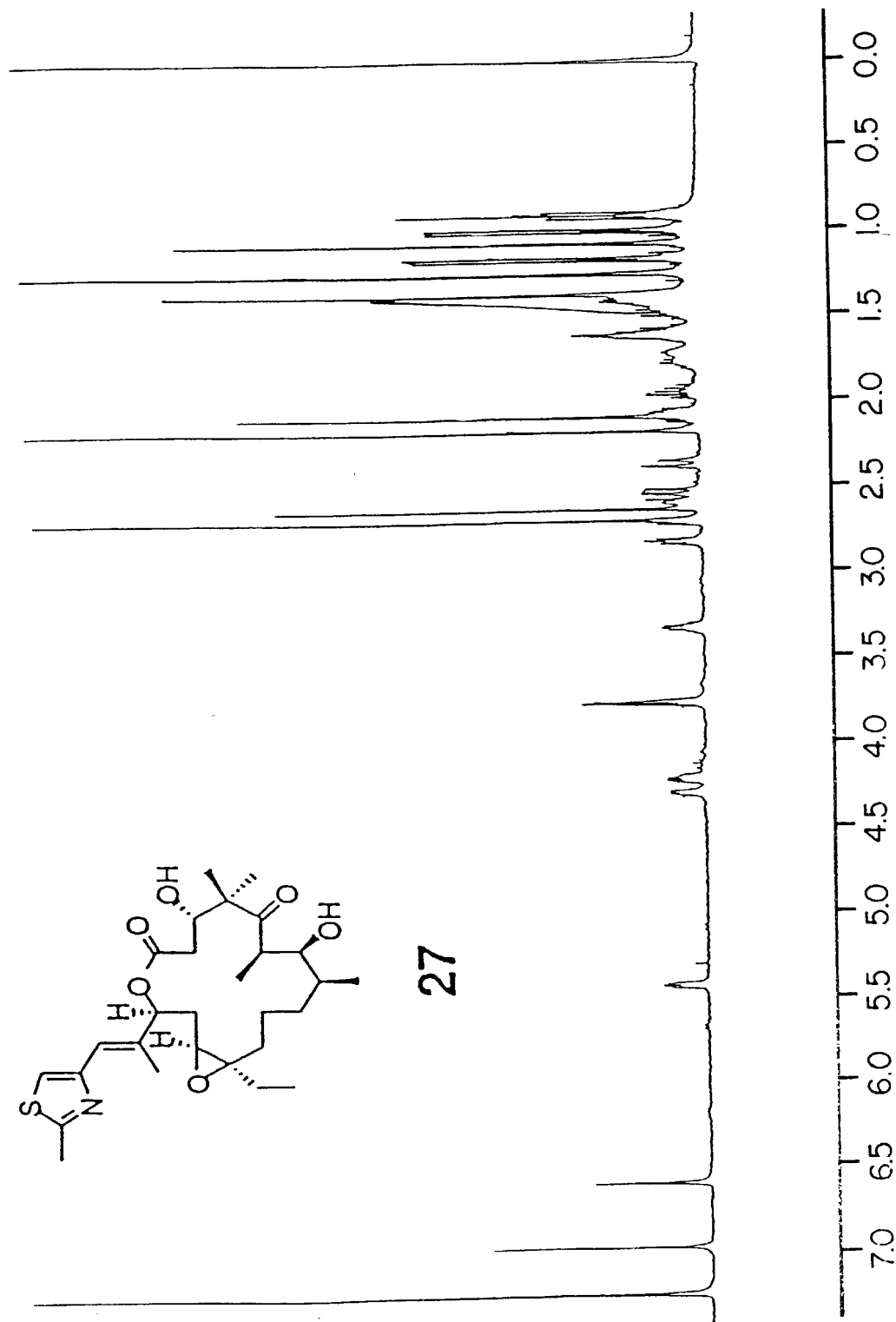
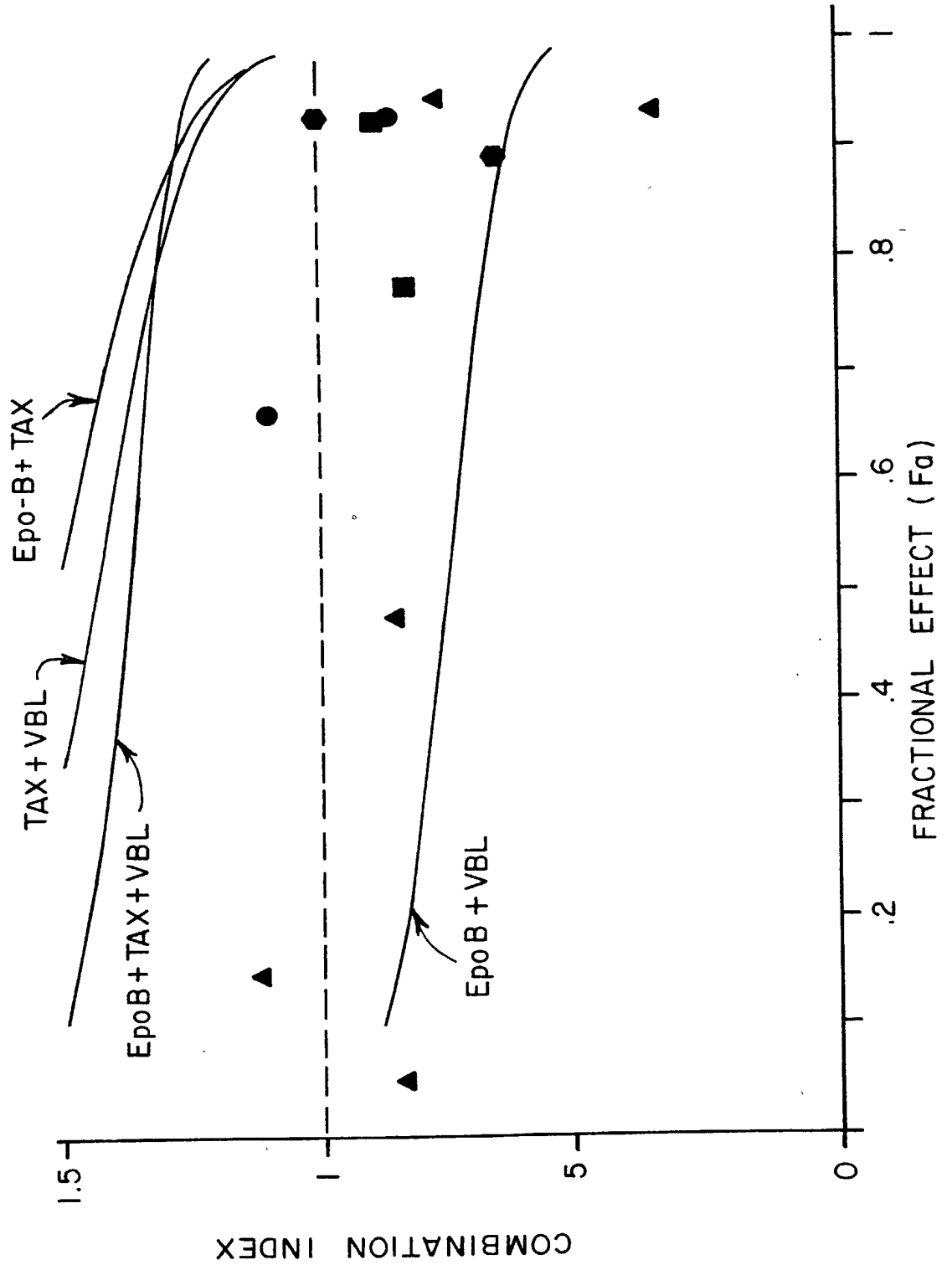


FIG. 37



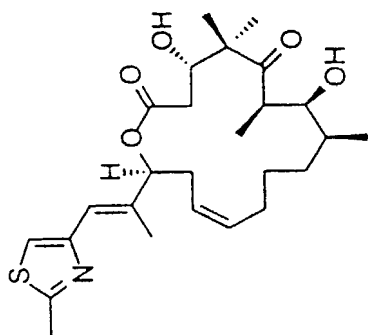
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FIG. 38



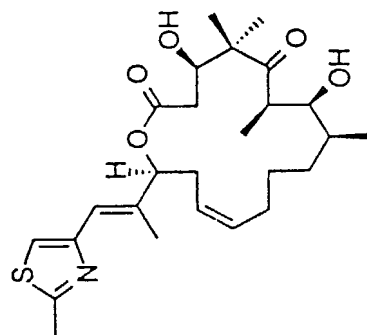
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FIG. 39A

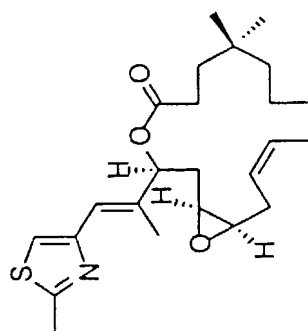


desoxyepothilone A

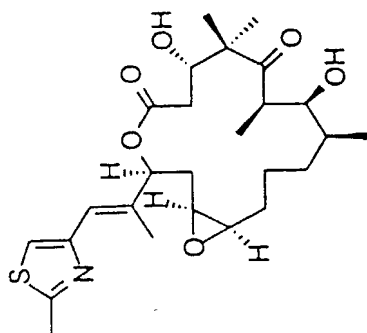
1
(0.022)
[0.012]



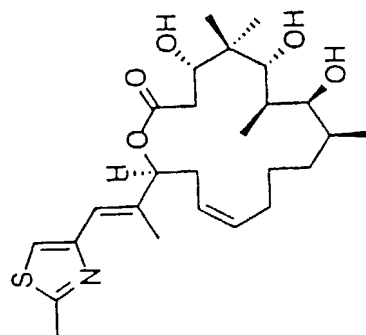
4
(2.12)
[43.0]



3
(271.1)
[22.4]

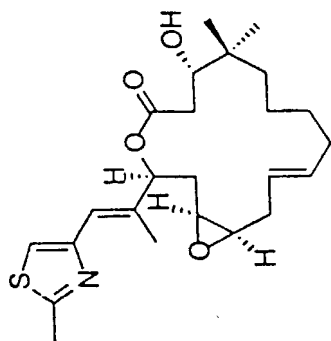


epothilone A
(0.0027)
[0.020]

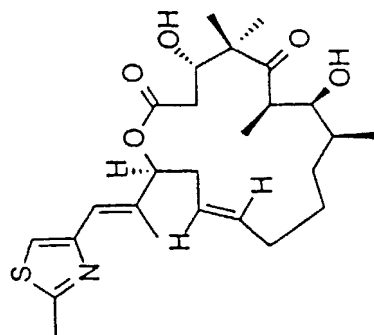


2
(14.23)
[6.28]

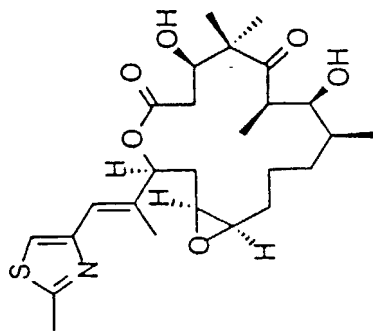
FIG. 39B



7
(7.36)
[9.82]



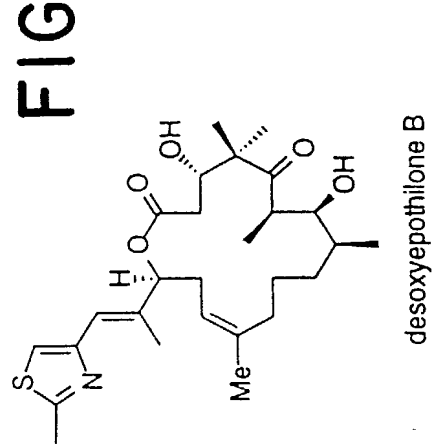
6
(0.052)
[0.035]



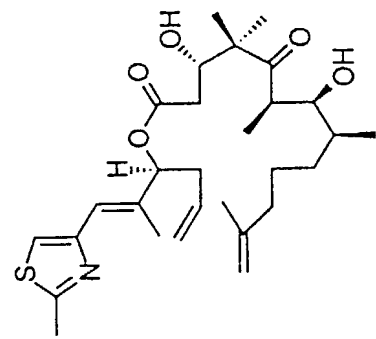
5
(>20)
[35.2]

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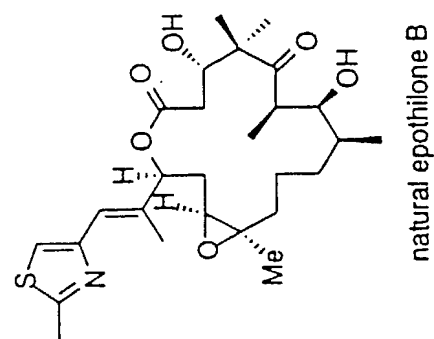
FIG. 40A



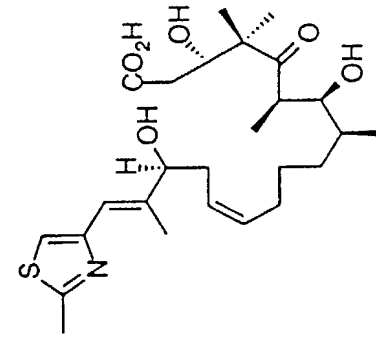
10
(0.0095)
[0.017]



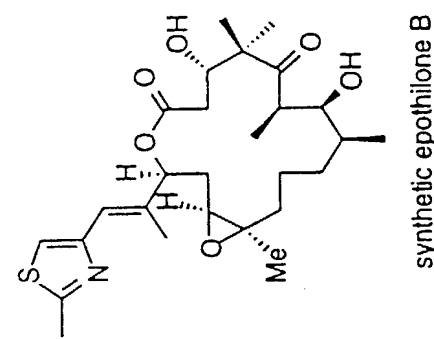
13
(11.53)
[5.63]



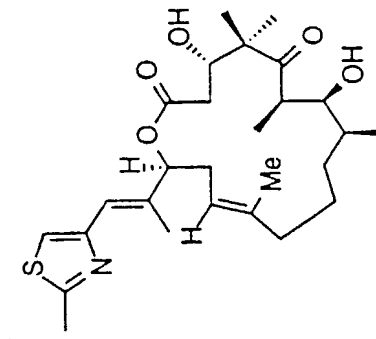
9
(0.00017)
[0.0012]



12
(0.79)
[>5]

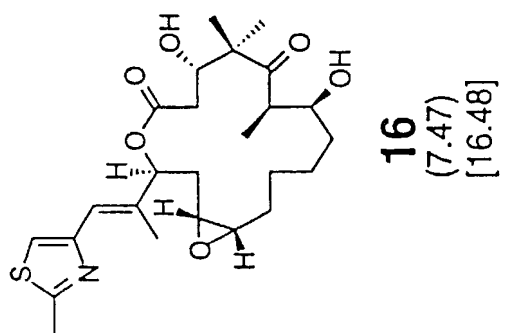
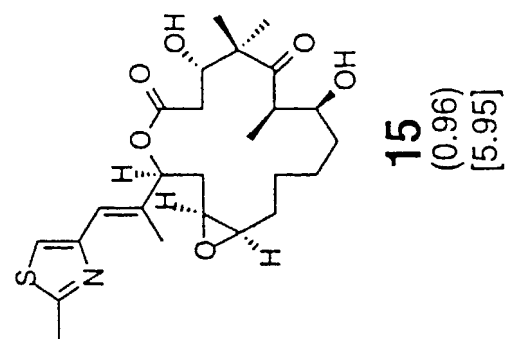
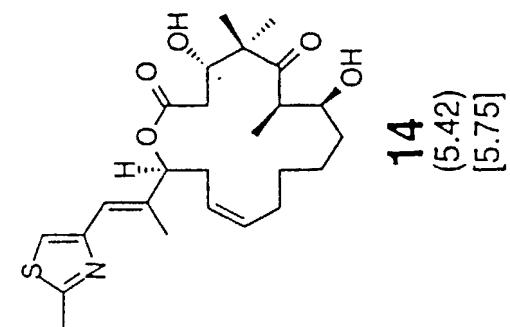


8
(0.00044)
[0.0026]



11
(0.090)
[0.262]

FIG. 40B



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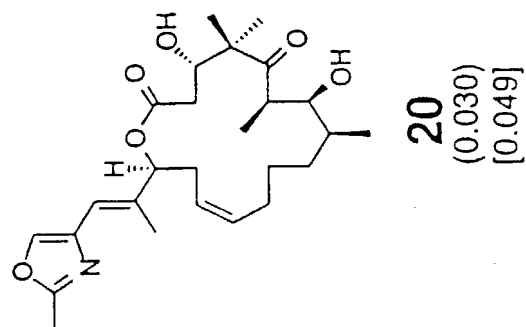
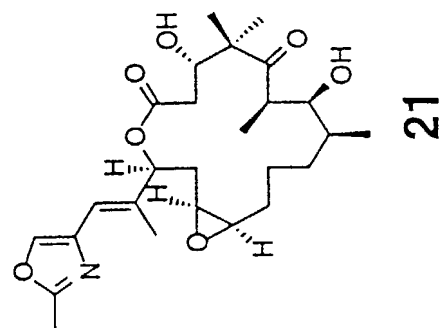
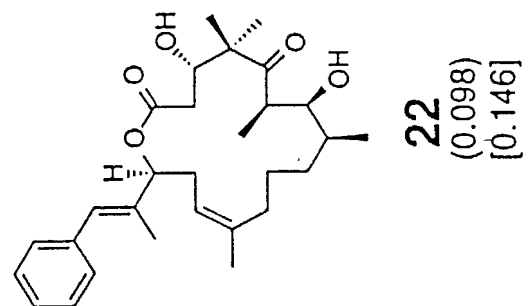
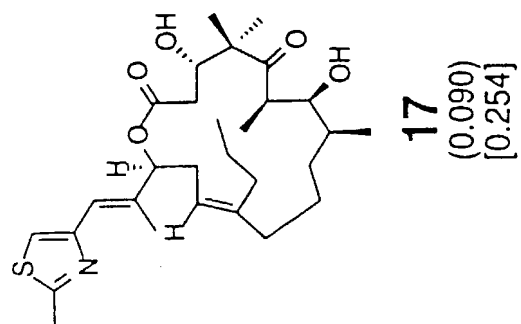
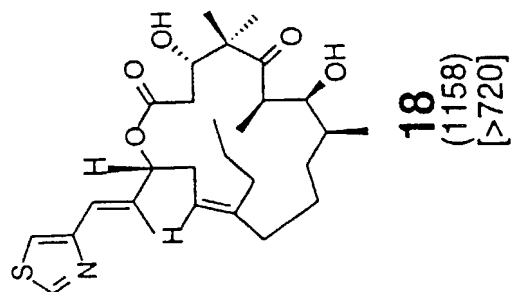
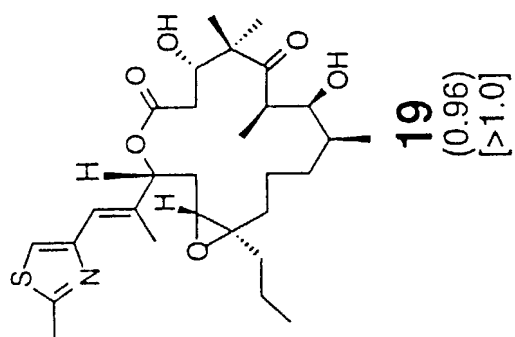
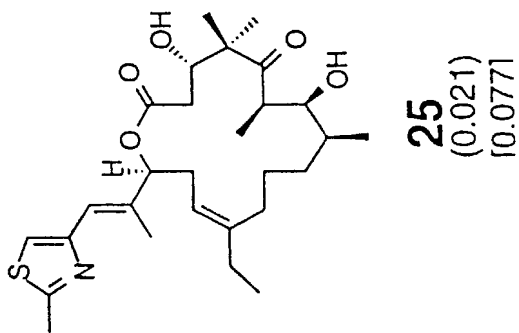
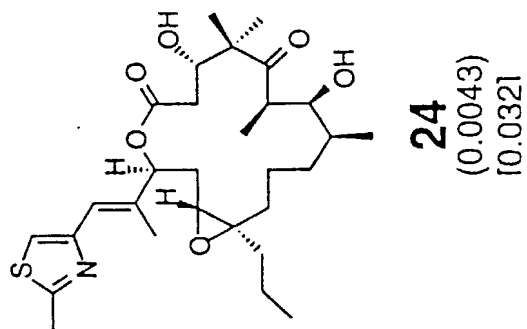
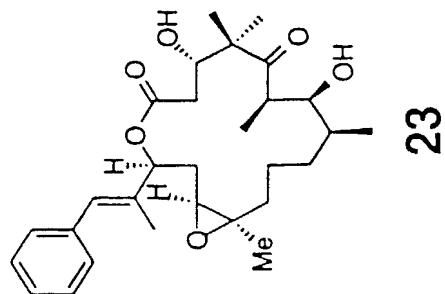


FIG. 41B



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FIG. 42A

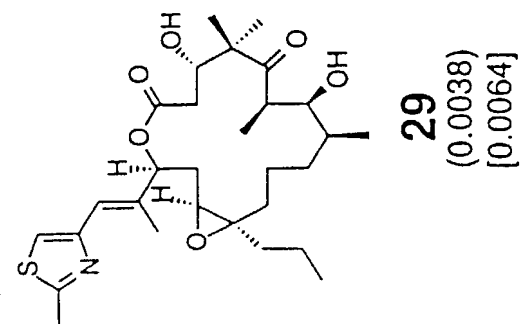
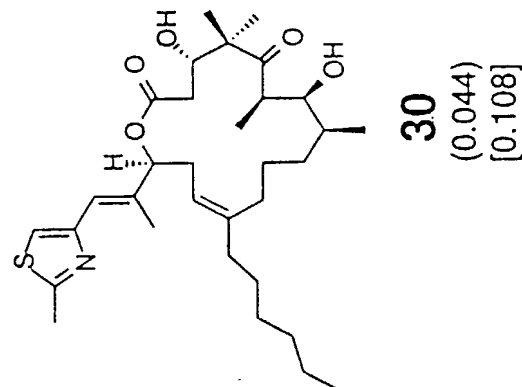
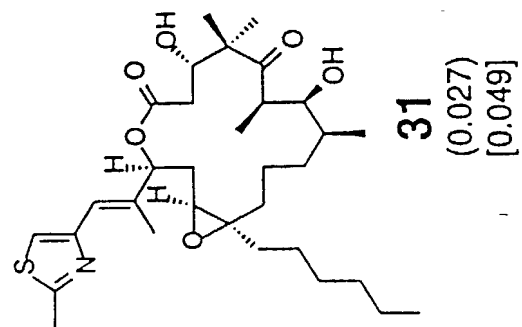
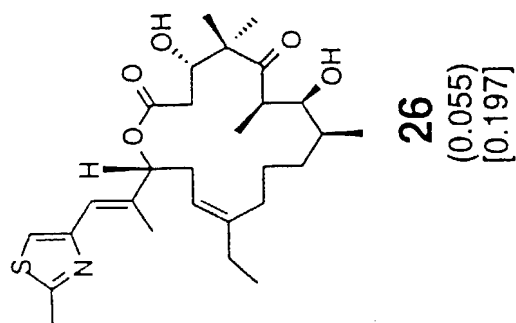
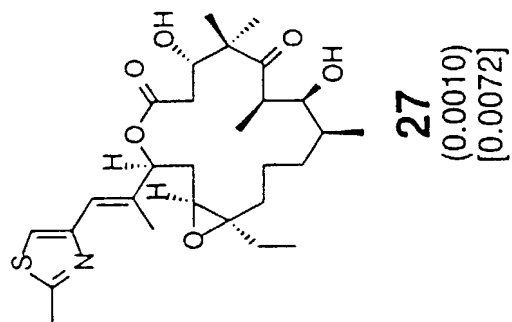
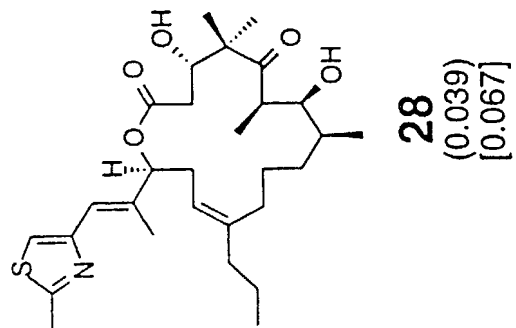


FIG. 42B

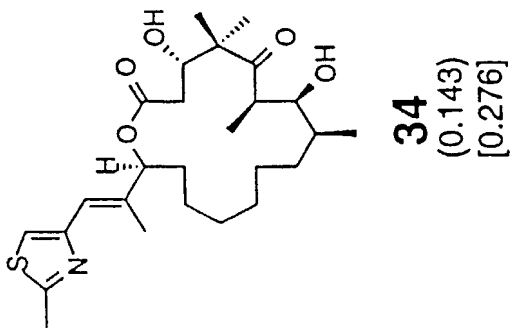
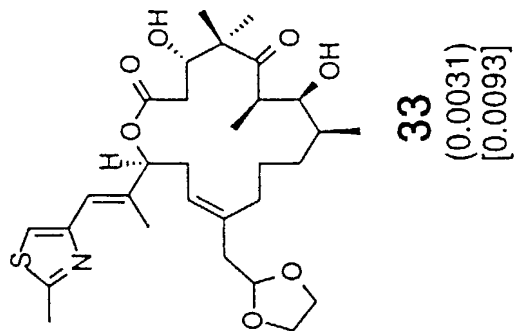
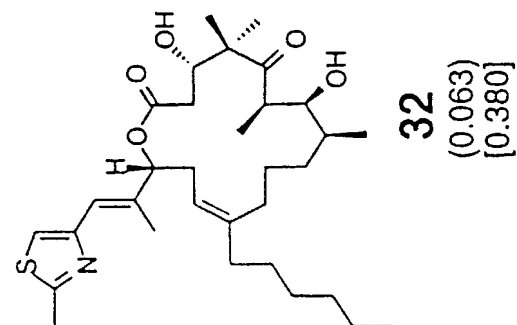
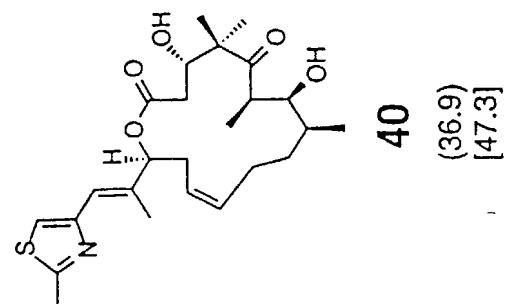
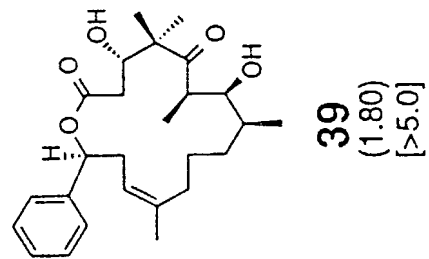
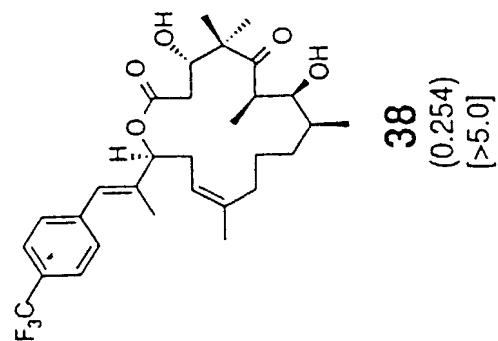
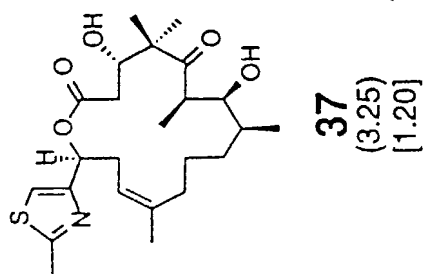
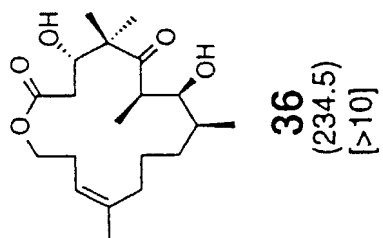
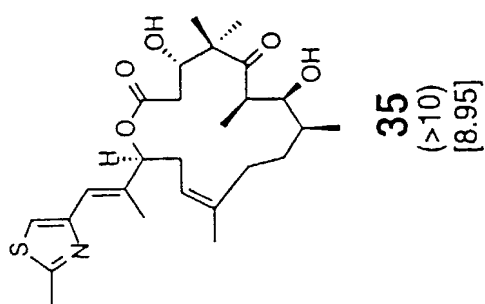


FIG. 42C



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FIG. 42D

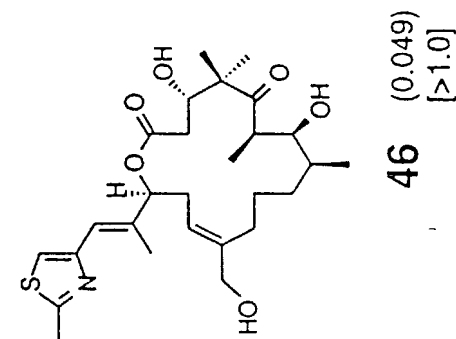
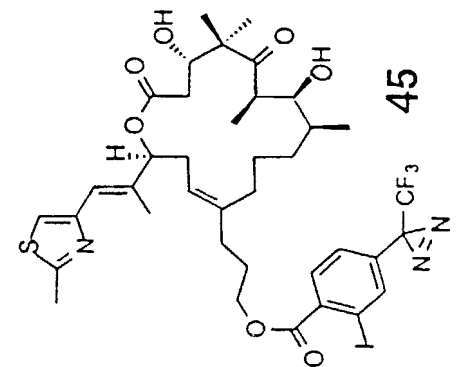
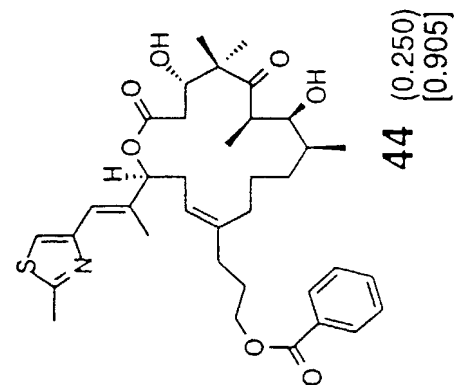
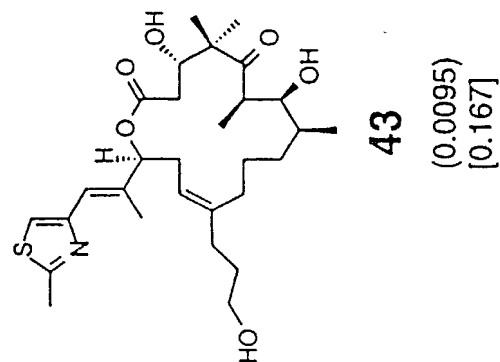
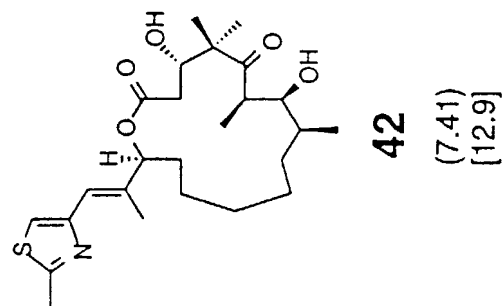
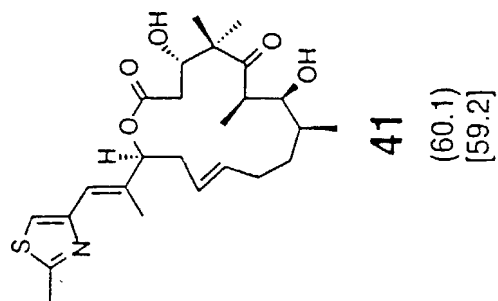
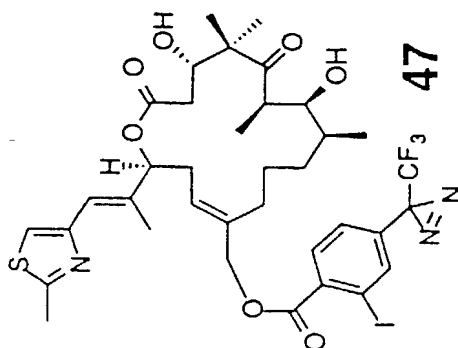
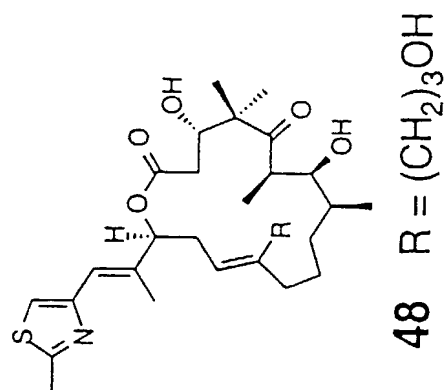
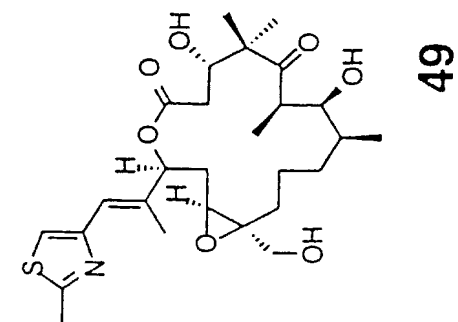
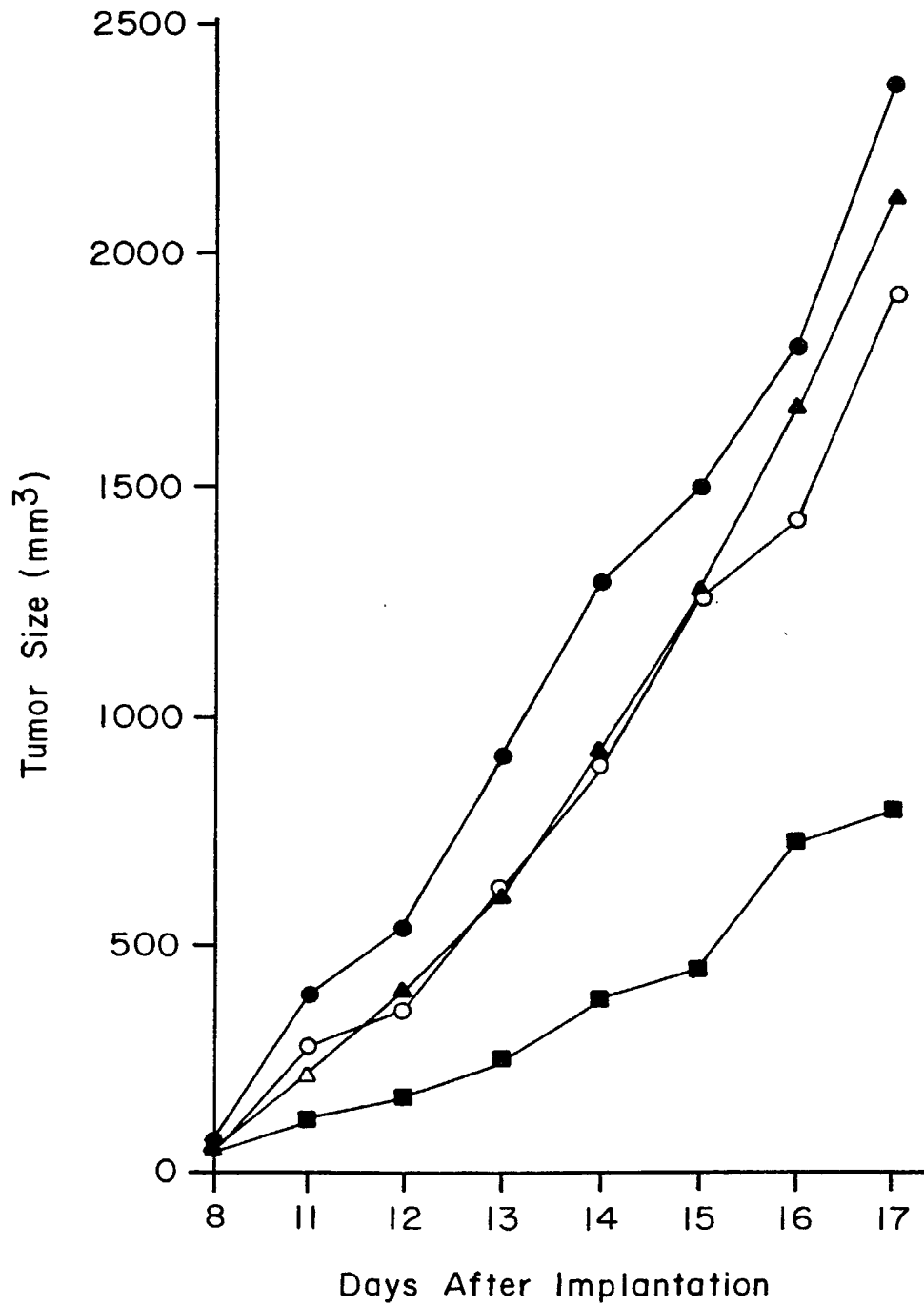


FIG. 42E

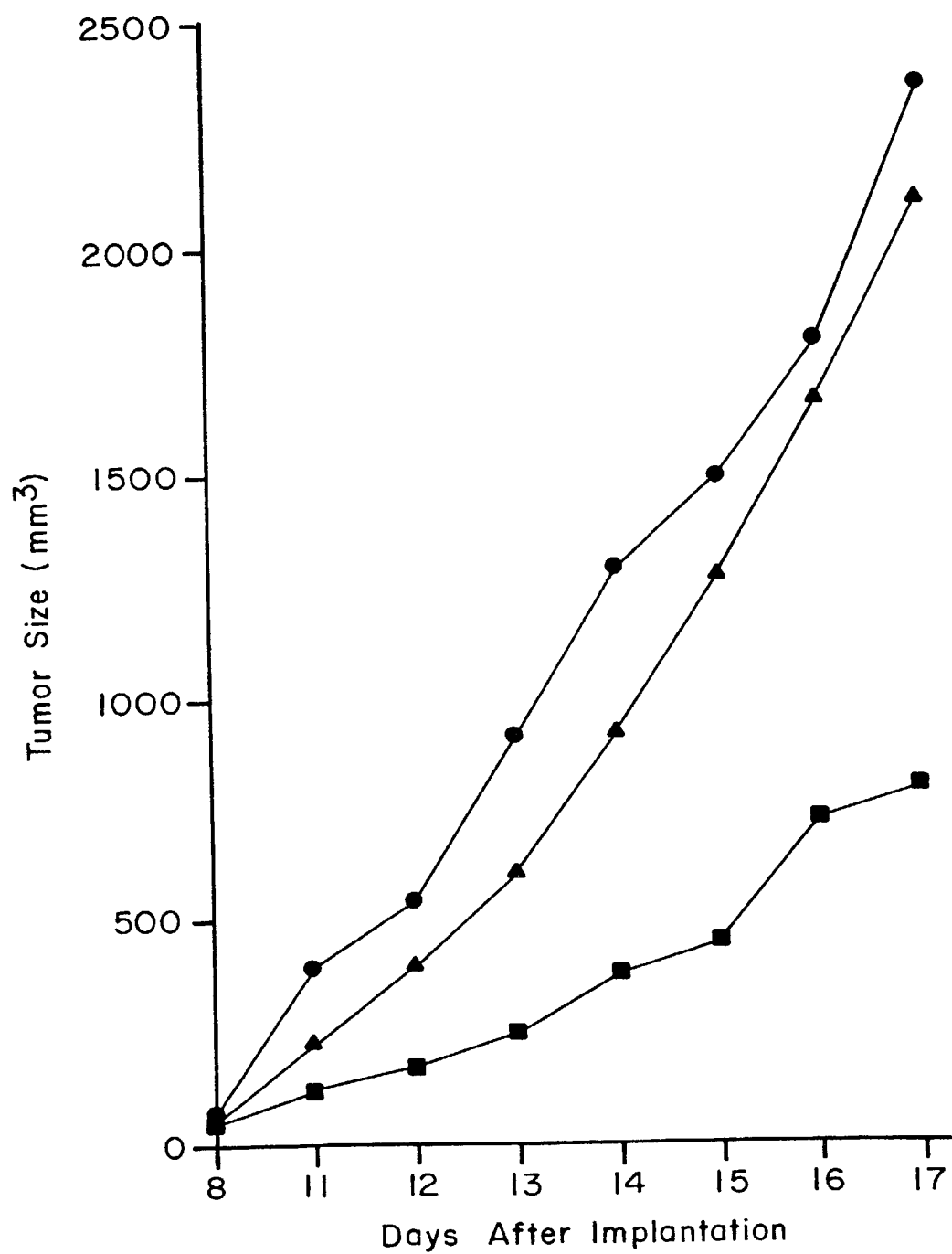


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FIG. 43A



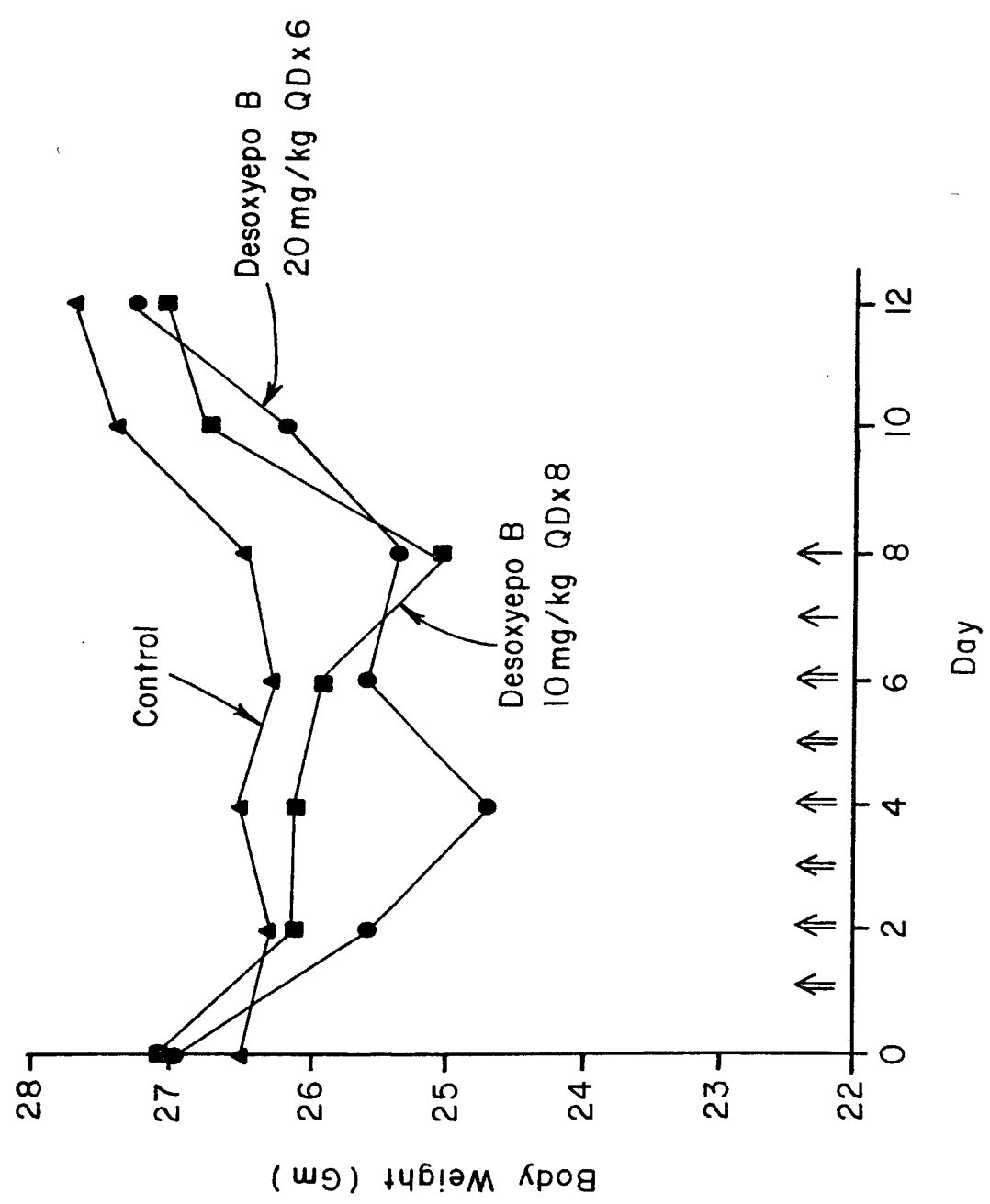
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FIG. 43 B



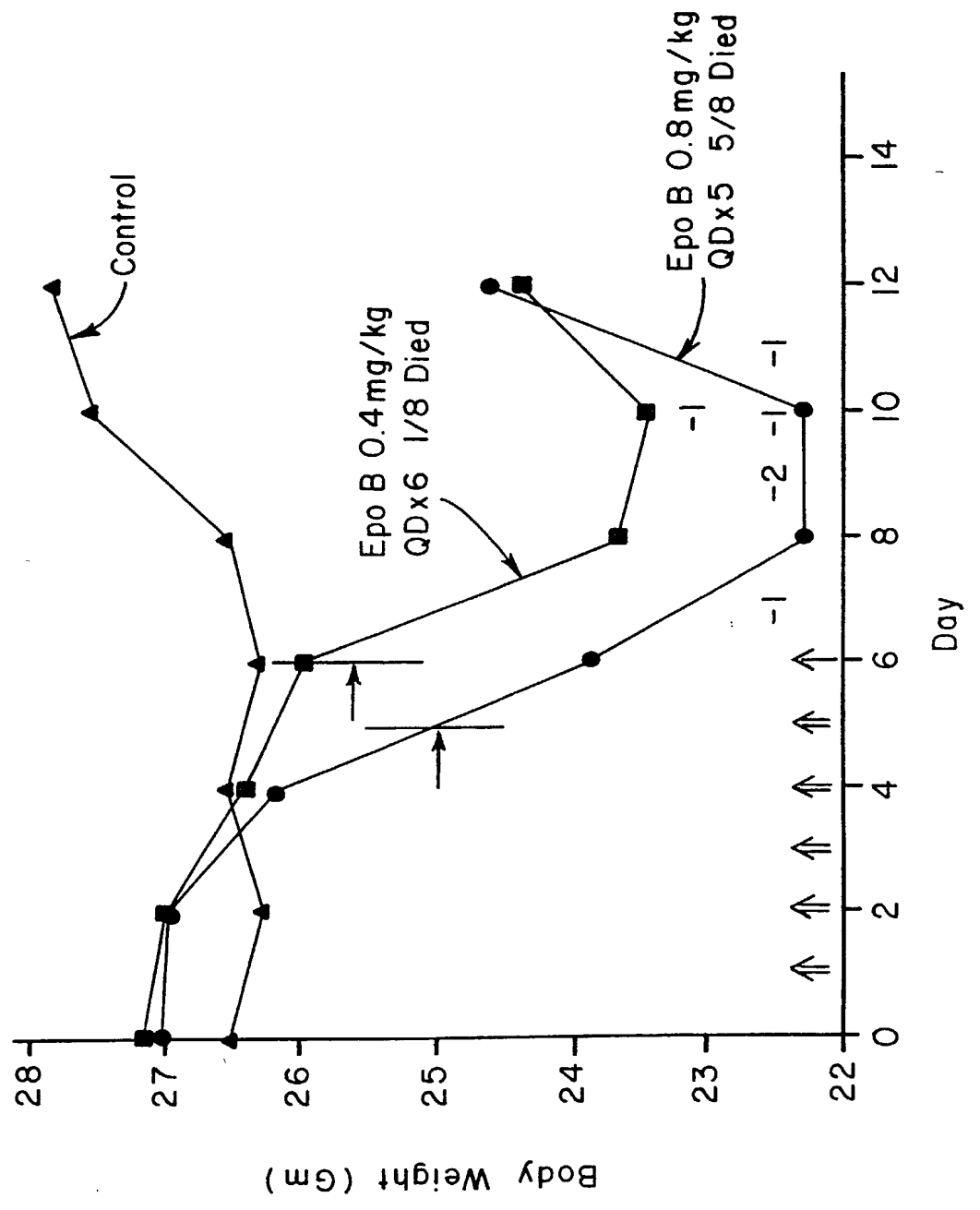
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FIG. 44A



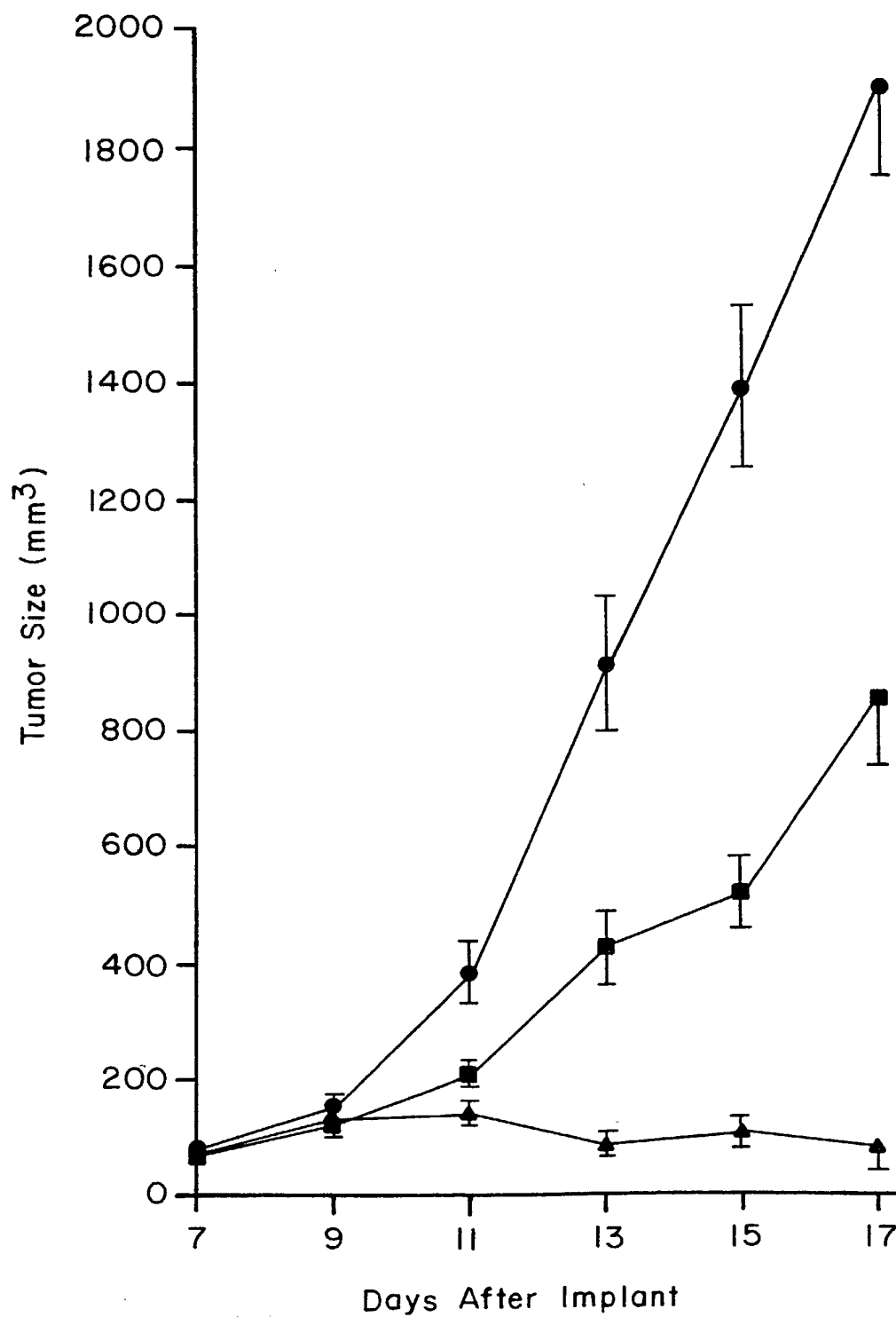
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FIG. 44B



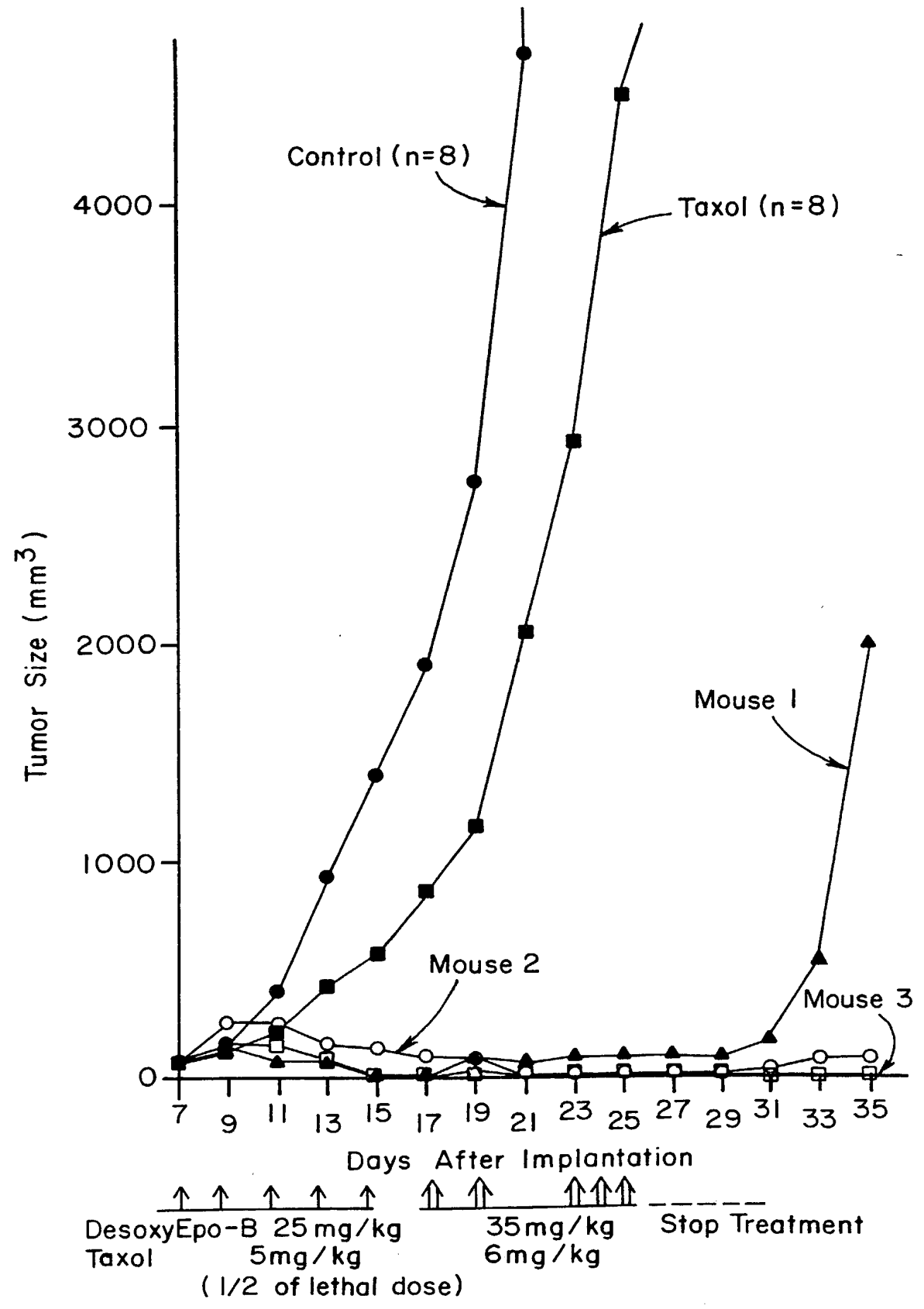
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FIG. 45A



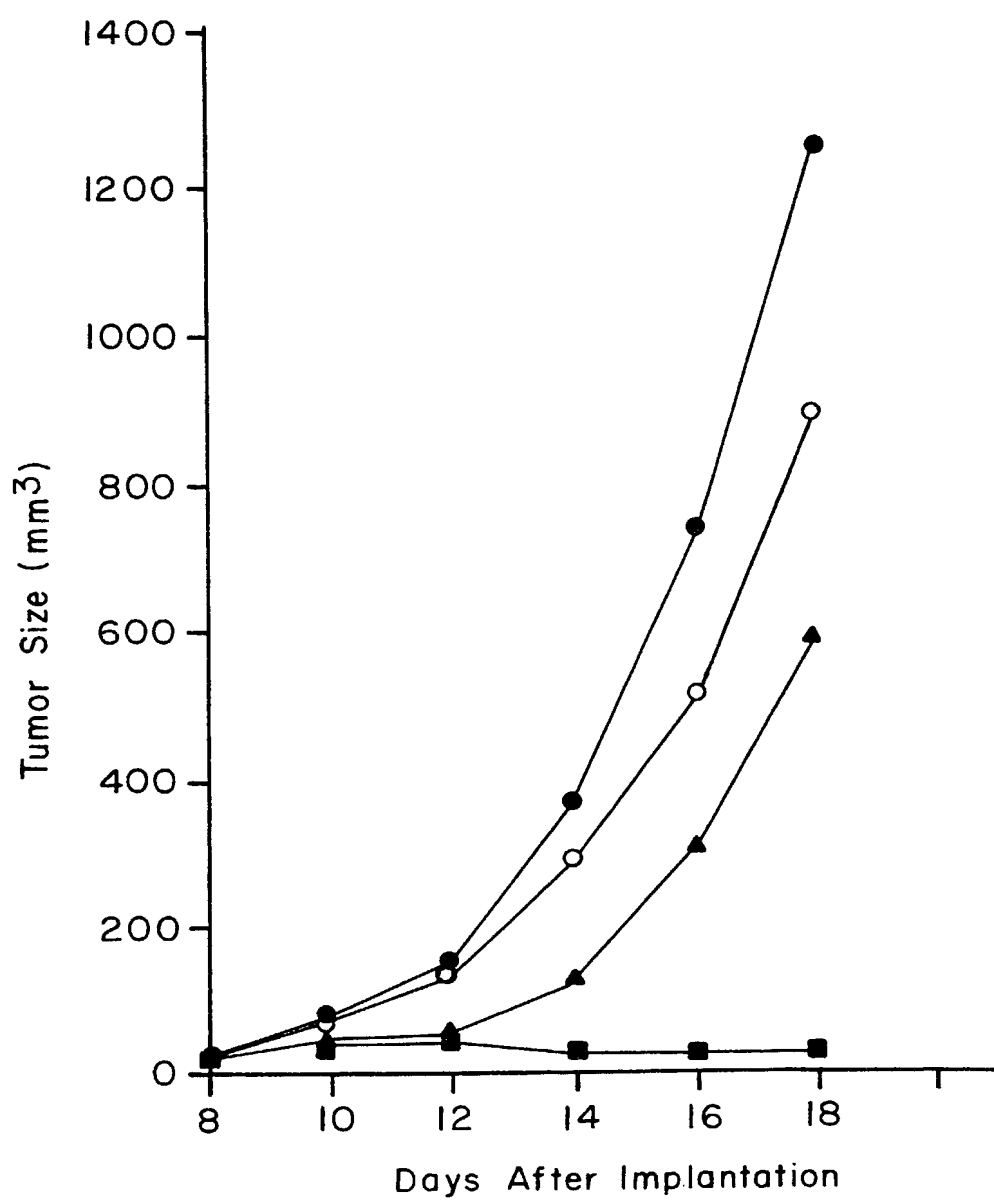
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FIG. 45 B



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FIG. 46



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FIG. 47

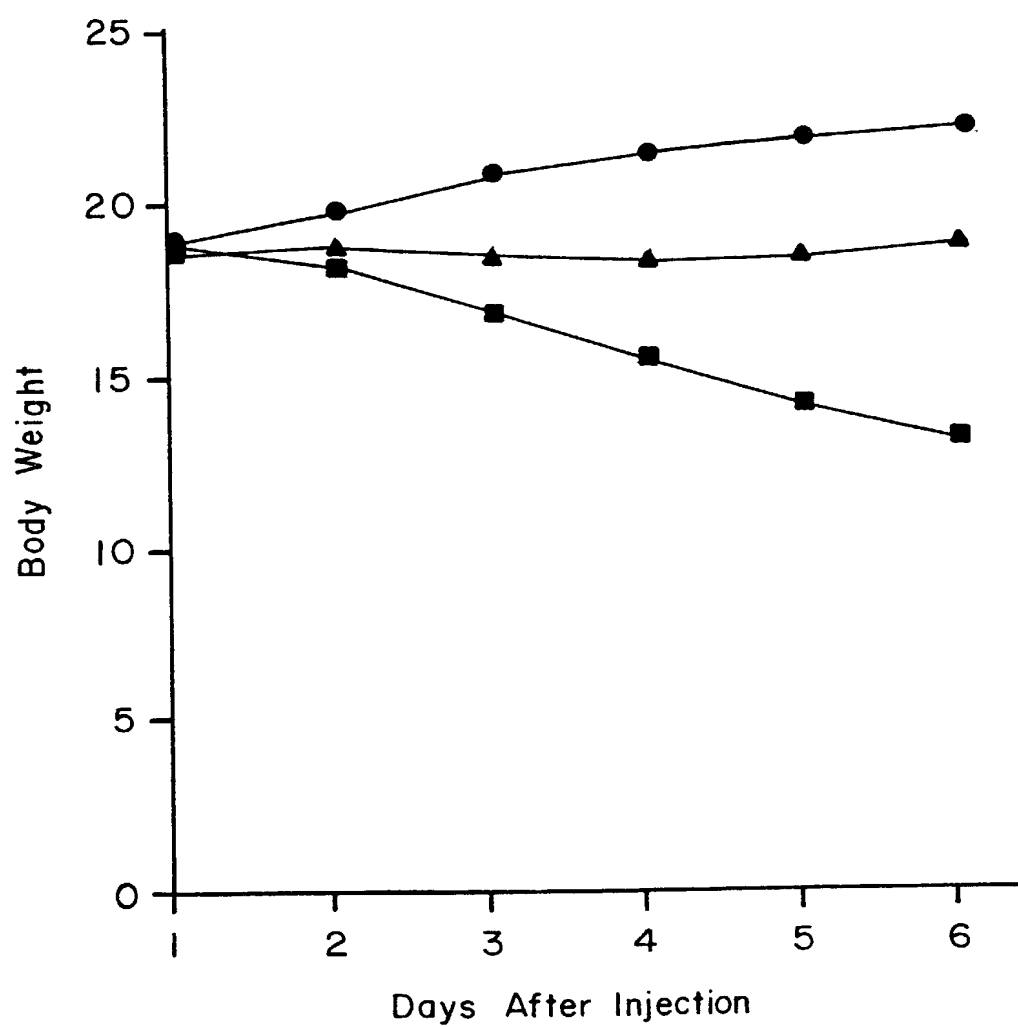
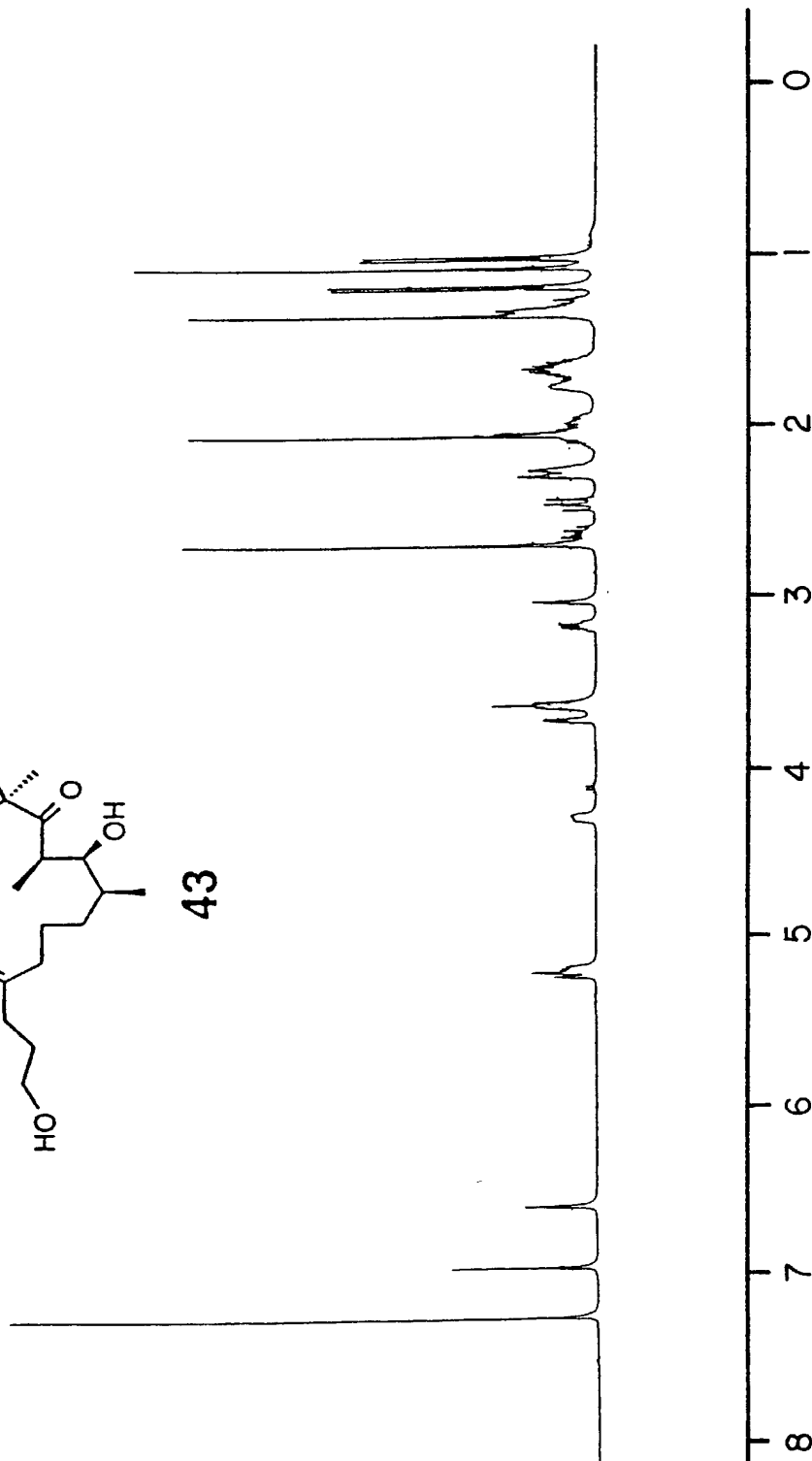
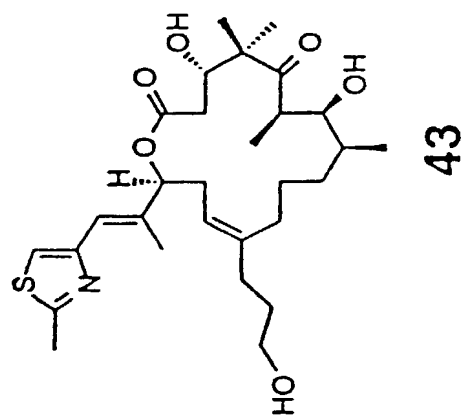
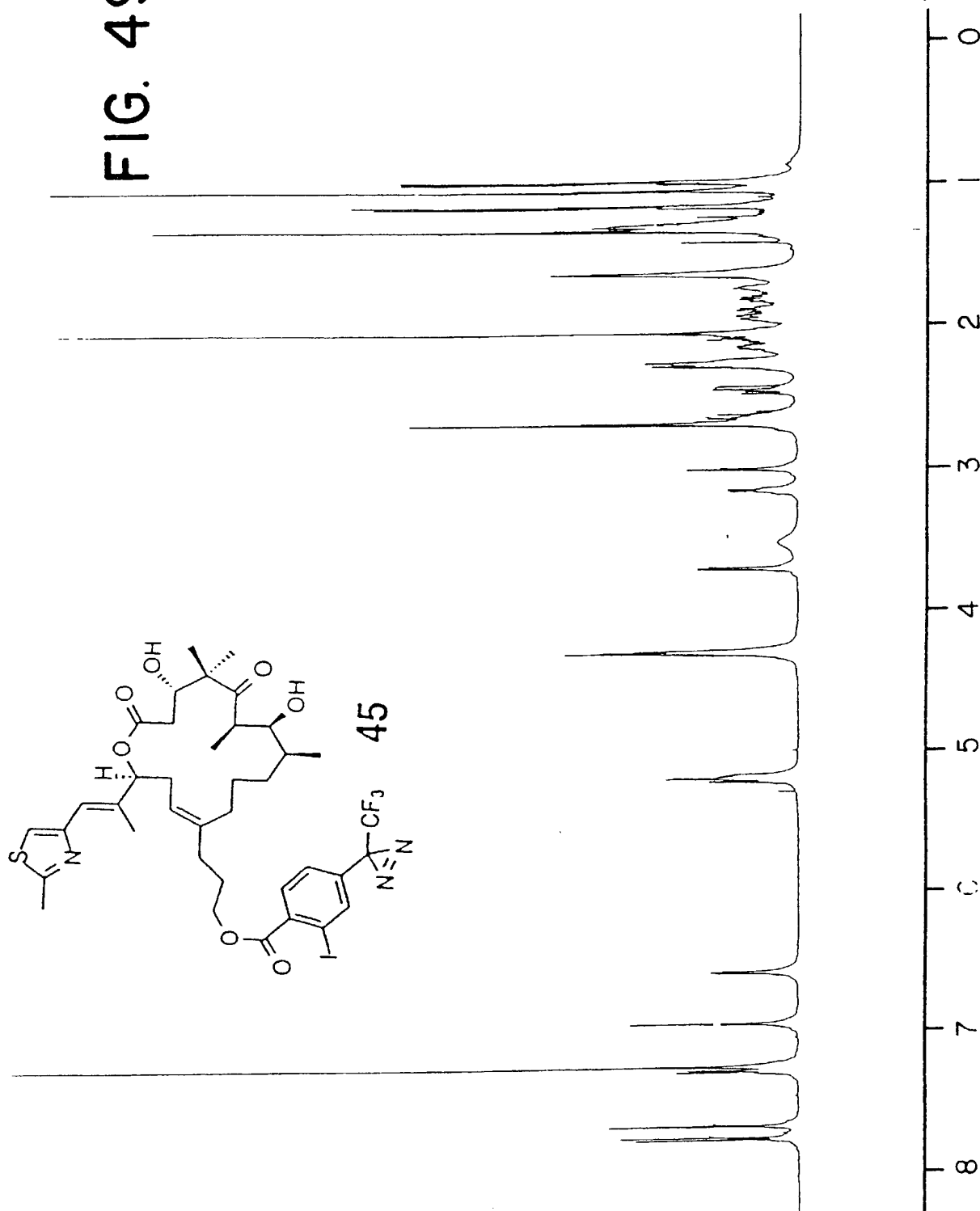


FIG. 48



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FIG. 49



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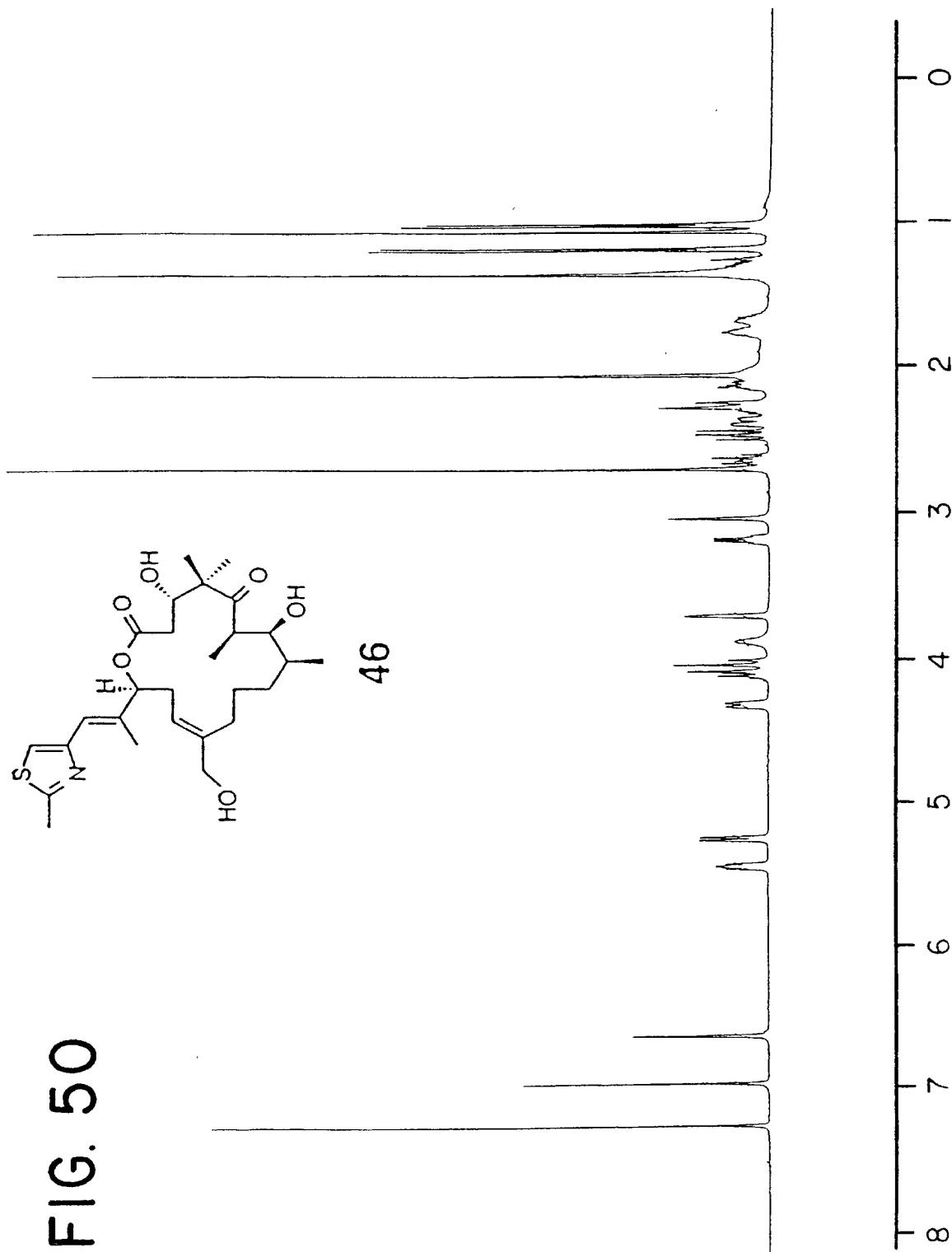


FIG. 51

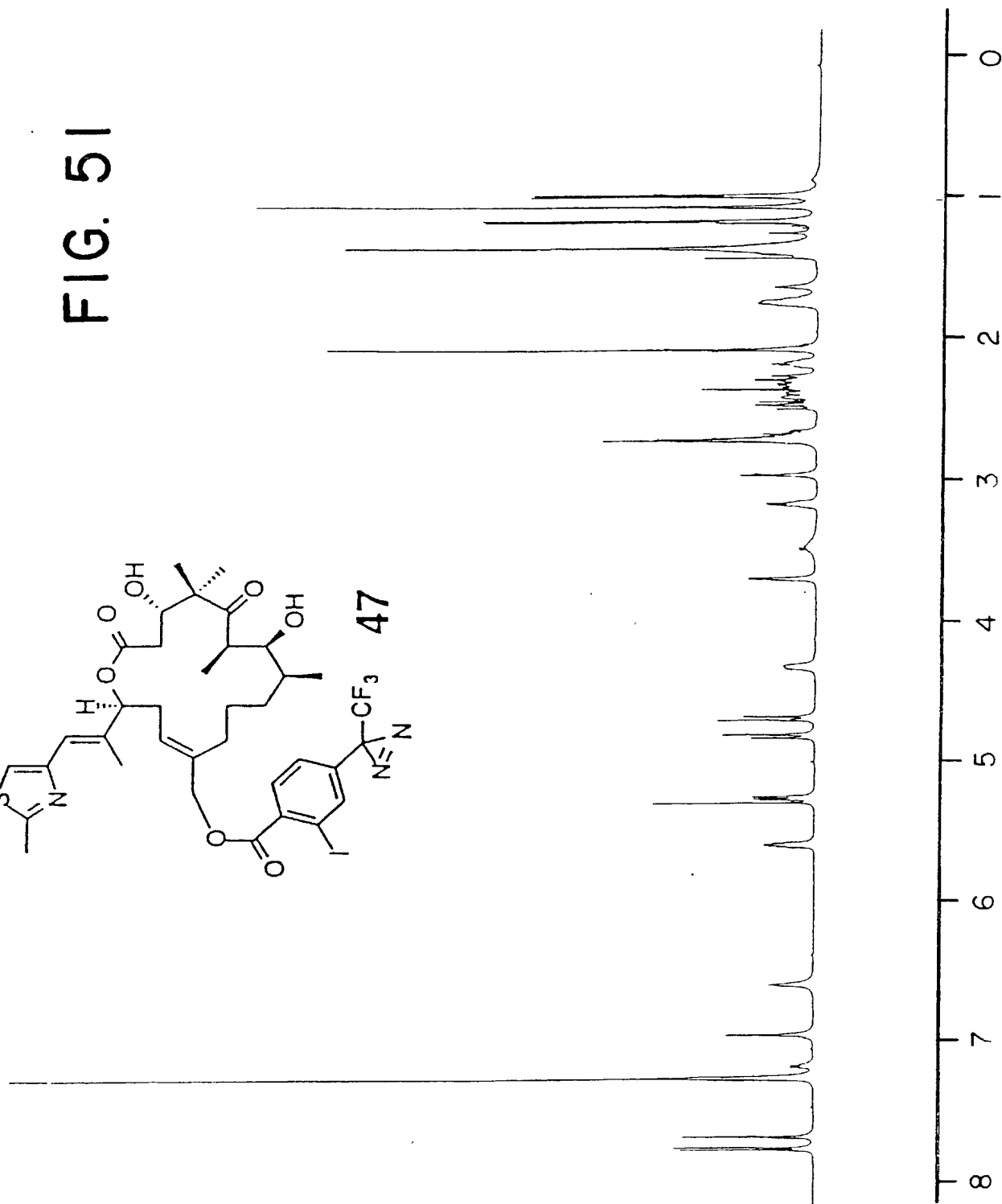
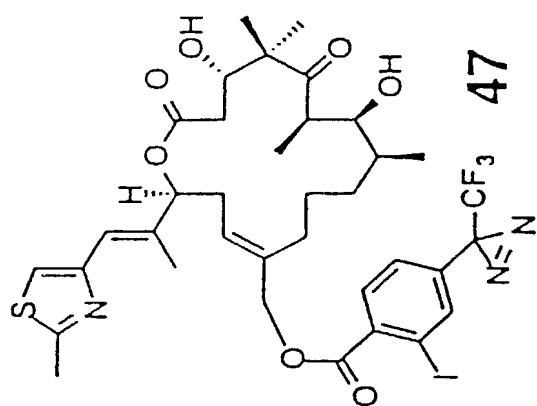
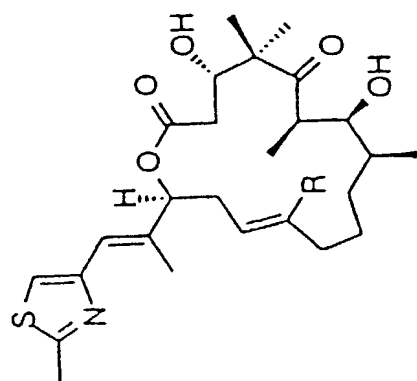
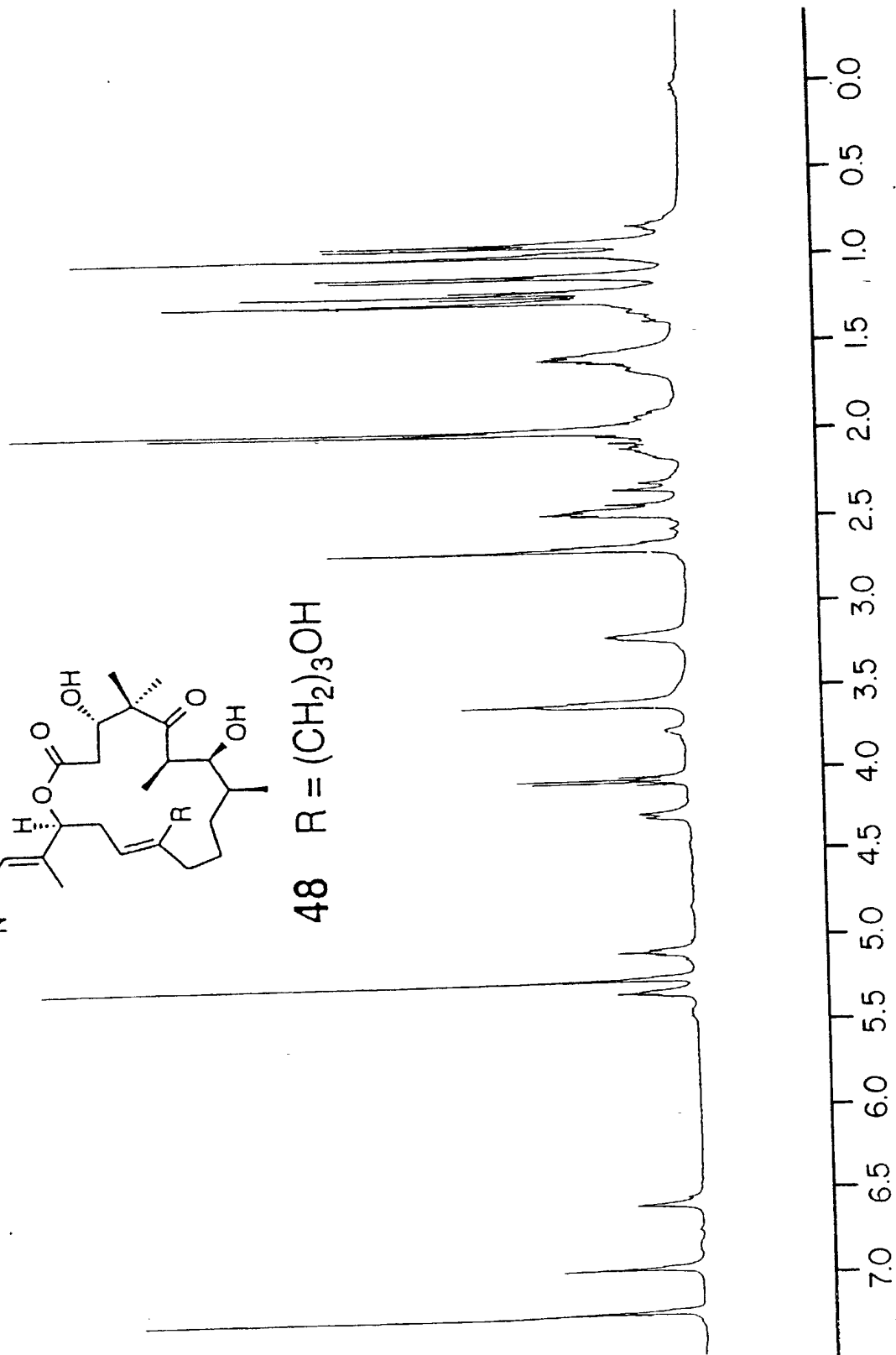


FIG. 52



48 R = (CH₂)₃OH



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